

LONGHORN ARMY AMMUNITION PLANT KARNACK, TEXAS

ADMINISTRATIVE RECORD

Volume 6 of 19

2010

Bate Stamp Numbers

00087185 – 00087951

Prepared for

**Department of the Army
Longhorn Army Ammunition Plant**

1976 – 2010

***LONGHORN ARMY AMMUNITION PLANT
KARNACK, TEXAS
ADMINISTRATIVE RECORD – CHRONOLOGICAL INDEX***

VOLUME 6 of 19

2010

- A. Title: Report (Continued) - Final Addendum to Final Feasibility Study
 LHAAP-16, Longhorn Army Ammunition Plant, Karnack, Texas
 Author(s): Shaw Environmental, Inc., Houston, Texas
 Recipient: All Stakeholders
 Date: March 30, 2010
 Bate Stamp: 00087185 - 00087951



158 Starlite Drive, Marietta, OH 45750 • T:740-373-4071 • F:740-373-4835 • <http://www.microbac.com>

Laboratory Report Number: L09030427

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories.

Review and compilation of your report was completed by Microbac's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

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This report was reviewed on March 26, 2009.

A handwritten signature in cursive script that reads "Stephanie Mossburg".

Stephanie Mossburg - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories.

This report was certified on March 26, 2009.

A handwritten signature in cursive script that reads "David E. Vandenberg".

David Vandenberg - Managing Director

State of origin: Texas

Accrediting authority: Texas Commission on Environmental Quality ID:T104704252-07-TX

QAPP: Microbac OVD

This report contains a total of 187 pages.

Look closer. Go further. Do more.



Microbac REPORT L09030427
PREPARED FOR Shaw E I, Inc.
WORK ID: LHAAP-16

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1.0 Introduction

Microbac Laboratories Inc.
REPORT NARRATIVE

Microbac Login No: L09030427

CHAIN OF CUSTODY: The chain of custody number was 5792.

SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 3 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 20-MAR-09
<i>Stephanie Mousling</i>

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each environmental sample that includes:

- a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
- b) dilution factors,
- c) preparation methods,
- d) Cleanup methods, and
- e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

- a) Calculated recovery (%R) for each analyte, and
- b) The laboratory's surrogate QC limits.

✓ R5 Test reports/summary forms for blank samples;

✓ R6 Test reports/summary forms for laboratory control samples (LCSs) including:

- a) LCS spiking amount,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %R and relative percent differences (RPDs), and
- e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) recovery and precision:

- a) the amount of analyte measured in the duplicate,
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

MICHAEL D. COCHRAN



Semivolatiles Lab Supervisor

March 26, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030427
 Project Name: 798-LONGHORN
 Method: 9056
 Prep Batch Number(s): WG298057
 Reviewer Name: MICHAEL D. COCHRAN
 LRC Date: March 23, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?			✓		
Were % moisture (or solids) reported for all soil and sediment samples?			✓		
If required for the project, TICs reported?	✓				
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?	✓				
Were MS/MSD analyzed at the appropriate frequency?	✓				
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	✓				

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?	✓				
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?	✓				
Were analytical duplicates analyzed at the appropriate frequency?	✓				
Were RPDs or relative standard deviations within the laboratory QC limits?	✓				
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NA(2)	NA(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name:	Microbac Laboratories Inc.
Laboratory Log Number:	L09030427
Project Name:	798-LONGHORN
Method:	9056
Prep Batch Number(s):	WG298057
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	March 23, 2009

EXCEPTIONS REPORT

ER# - Description

- (1) NA = Not applicable to method or project
- (2) NR = Not reviewed
- (3) ER# = Exception report number

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

- ✓R1 Field chain-of-custody documentation;
- ✓R2 sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - b) dilution factors,
 - c) preparation methods,
 - d) Cleanup methods, and
 - e) If required for the project, tentatively identified compounds (TICs)
- ✓R4 Surrogate recovery data including:
 - a) Calculated recovery (%R) for each analyte, and
 - b) The laboratory's surrogate QC limits.
- ✓R5 Test reports/summary forms for blank samples;
- ✓R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amount,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- ✓R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %R and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- ✓R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- ✓R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- ✓R10 Other problems or anomalies.
- ✓The exception Report for every "No" or "Not Reviewed (NR)" item IN laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

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MIKE D. ALBERTSON



Volatiles Lab Supervisor

March 26, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030427
 Project Name: 798-LONGHORN
 Method: 8260B
 Prep Batch Number(s): WG297819, WG297941
 Reviewer Name: MIKE D. ALBERTSON
 LRC Date: March 26, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?	✓				
Were surrogate percent recoveries in all samples within the laboratory QC limits?		✓			1
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		✓			2
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?		✓			3
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?			✓		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			✓		
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?	✓				
Were ion abundance data within the method-required QC limits?	✓				
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?	✓				
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?	✓				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NR(2)	ER(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

EXCEPTIONS REPORT

ER# - Description

- 1) Dibromofluoromethane was below the lower control limit in the 10x analysis of sample 05 and exceeded the upper control limit in samples 03 and 11.
- 2) 2-Butanone exceeded the upper advisory limit in the LCS/LCSD analyzed 03/20/09. 2-Butanone exceeded the upper advisory limit and isopropylbenzene was below the lower control limit in the LCS/LCSD analyzed 03/23/09.
- 3) 2-Hexanone and 1,2-dibromo-3-chloropropane exceeded the upper advisory limits in the LCS/LCSD analyzed 03/23/09.

Footnotes:

- (1) NA = Not applicable to method or project
- (2) NR = Not reviewed
- (3) ER# = Exception report number

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each environmental sample that includes:

- a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
- b) dilution factors,
- c) preparation methods,
- d) Cleanup methods, and
- e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

- a) Calculated recovery (%R) for each analyte, and
- b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms FOR laboratory control samples (LCSs) including:

- a) LCS spiking amount,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %R and relative percent differences (RPDs), and
- e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) recovery and precision:

- a) the amount of analyte measured in the duplicate,
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

MAREN M. BEERY



Metals Supervisor

March 20, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030427
 Project Name: 798-LONGHORN
 Method: 6020
 Prep Batch Number(s): WG297722
 Reviewer Name: MAREN M. BEERY
 LRC Date: March 20, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				ER2
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <RL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?			✓		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				ER1
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?			✓		
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <RL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?	✓				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	✓				
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NA(2)	NA(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name:	Microbac Laboratories Inc.
Laboratory Log Number:	L09030427
Project Name:	798-LONGHORN
Method:	6020
Prep Batch Number(s):	WG297722
Reviewer Name:	MAREN M. BEERY
LRC Date:	March 20, 2009

EXCEPTIONS REPORT

ER#1- Due to high levels of nontarget analytes, client samples 01 through 10 were analyzed at dilutions for all analytes.

ER2 - Client sample 02 required further dilution analysis in order to obtain a result for chromium within the linear range.

Client sample 04 required further dilution analysis in order to obtain a result for manganese within the linear range. Client sample 10 required further dilution analysis in order to obtain a result for nickel within the linear range.

Footnotes:

(1) NA = Not applicable to method or project

(2) NR = Not reviewed

(3) ER# = Exception report number

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

LABORATORY REPORT

00087206

L09030427

03/26/09 16:12

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025

Project: Longhorn AAP

Site: LHAAP-16

P.O. Number: 389869/ 390836 (GWTP)

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
16WW32-031709	L09030427-03	8260B	1	19-MAR-09
16WW16-031709	L09030427-05	8260B	250	19-MAR-09
16WW16-031709	L09030427-05	8260B	10	19-MAR-09
TRIP BLANK	L09030427-11	8260B	1	19-MAR-09



Sample Number: **L09030427-03**
 Client ID: **16WW32-031709**
 Matrix: **Water**
 Workgroup Number: **WG297941**
 Collect Date: **03/17/2009 12:05**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/23/2009 14:15**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/23/2009 14:15**
 File ID: **10M71271**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

Report Number: **L09030427**Report Date : **March 26, 2009**

00087208

Sample Number: **L09030427-03**
 Client ID: **16WW32-031709**
 Matrix: **Water**
 Workgroup Number: **WG297941**
 Collect Date: **03/17/2009 12:05**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/23/2009 14:15**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/23/2009 14:15**
 File ID: **10M71271**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	121	86	118	*	
1,2-Dichloroethane-d4	102	80	120		
Toluene-d8	99.4	88	110		
4-Bromofluorobenzene	90.4	86	115		

U Not detected at or above adjusted sample detection limit

* Surrogate or spike compound out of range

Sample Number: L09030427-05
 Client ID: 16WW16-031709
 Matrix: Water
 Workgroup Number: WG297941
 Collect Date: 03/17/2009 14:35
 Sample Tag: DL02

PrePrep Method: NONE
 Prep Method: 5030B
 Analytical Method: 8260B
 Analyst: TMB
 Dilution: 250
 Units: ug/L

Instrument: HPMS10
 Prep Date: 03/23/2009 14:47
 Cal Date: 03/18/2009 15:23
 Run Date: 03/23/2009 14:47
 File ID: 10M71272

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	2500	625
Benzene	71-43-2		U	250	31.3
Bromobenzene	108-86-1		U	250	31.3
Bromochloromethane	74-97-5		U	250	50.0
Bromodichloromethane	75-27-4		U	250	62.5
Bromoform	75-25-2		U	250	125
Bromomethane	74-83-9		U	250	125
2-Butanone	78-93-3		U	2500	625
n-Butylbenzene	104-51-8		U	250	62.5
sec-Butylbenzene	135-98-8		U	250	62.5
tert-Butylbenzene	98-06-6		U	250	62.5
Carbon disulfide	75-15-0		U	250	125
Carbon tetrachloride	56-23-5		U	250	62.5
Chlorobenzene	108-90-7		U	250	31.3
Chlorodibromomethane	124-48-1		U	250	62.5
Chloroethane	75-00-3		U	250	125
2-Chloroethyl vinyl ether	110-75-8		U	2500	500
Chloroform	67-66-3		U	250	31.3
Chloromethane	74-87-3		U	250	62.5
2-Chlorotoluene	95-49-8		U	250	31.3
4-Chlorotoluene	106-43-4		U	250	62.5
1,2-Dibromo-3-chloropropane	96-12-8		U	1250	250
1,2-Dibromoethane	106-93-4		U	250	62.5
Dibromomethane	74-95-3		U	250	62.5
1,2-Dichlorobenzene	95-50-1		U	250	31.3
1,3-Dichlorobenzene	541-73-1		U	250	62.5
1,4-Dichlorobenzene	106-46-7		U	250	31.3
Dichlorodifluoromethane	75-71-8		U	250	62.5
1,1-Dichloroethane	75-34-3		U	250	31.3
1,2-Dichloroethane	107-06-2		U	250	62.5
1,1-Dichloroethene	75-35-4		U	250	125
cis-1,2-Dichloroethene	156-59-2	11800		250	62.5
trans-1,2-Dichloroethene	156-60-5		U	250	62.5
1,2-Dichloropropane	78-87-5		U	250	50.0
1,3-Dichloropropane	142-28-9		U	250	50.0
2,2-Dichloropropane	594-20-7		U	250	62.5
cis-1,3-Dichloropropene	10061-01-5		U	250	62.5
trans-1,3-Dichloropropene	10061-02-6		U	250	125
1,1-Dichloropropene	563-58-6		U	250	62.5
Ethylbenzene	100-41-4		U	250	62.5
2-Hexanone	591-78-6		U	2500	625
Hexachlorobutadiene	87-68-3		U	250	62.5
Isopropylbenzene	98-82-8		U	250	62.5
p-Isopropyltoluene	99-87-6		U	250	62.5
4-Methyl-2-pentanone	108-10-1		U	2500	625
Methylene chloride	75-09-2		U	1250	62.5
Naphthalene	91-20-3		U	250	50.0
n-Propylbenzene	103-65-1		U	250	31.3
Styrene	100-42-5		U	250	31.3
1,1,1,2-Tetrachloroethane	630-20-6		U	250	62.5
1,1,2,2-Tetrachloroethane	79-34-5		U	250	31.3
Tetrachloroethene	127-18-4		U	250	62.5
Toluene	108-88-3		U	250	62.5
1,2,3-Trichlorobenzene	87-61-6		U	250	37.5
1,2,4-Trichlorobenzene	120-82-1		U	250	50.0
1,1,1-Trichloroethane	71-55-6		U	250	62.5
1,1,2-Trichloroethane	79-00-5		U	250	62.5
Trichloroethene	79-01-6	18900		250	62.5
Trichlorofluoromethane	75-69-4		U	250	62.5

Sample Number: **L09030427-05**
 Client ID: **16WW16-031709**
 Matrix: **Water**
 Workgroup Number: **WG297941**
 Collect Date: **03/17/2009 14:35**
 Sample Tag: **DL02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **250**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/23/2009 14:47**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/23/2009 14:47**
 File ID: **10M71272**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	250	125
1,2,4-Trimethylbenzene	95-63-6		U	250	62.5
1,3,5-Trimethylbenzene	108-67-8		U	250	62.5
Vinyl acetate	108-05-4		U	2500	625
Vinyl chloride	75-01-4	772		250	62.5
o-Xylene	95-47-6		U	250	62.5
m-,p-Xylene	136777-61-2		U	250	125
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	118	86	118		
1,2-Dichloroethane-d4	104	80	120		
Toluene-d8	99.7	88	110		
4-Bromofluorobenzene	88.9	86	115		

U Not detected at or above adjusted sample detection limit

Sample Number: L09030427-05
 Client ID: 16WW16-031709
 Matrix: Water
 Workgroup Number: WG297819
 Collect Date: 03/17/2009 14:35
 Sample Tag: DL01

PrePrep Method: NONE
 Prep Method: 5030B
 Analytical Method: 8260B
 Analyst: TMB
 Dilution: 10
 Units: ug/L

Instrument: HPMS10
 Prep Date: 03/20/2009 18:49
 Cal Date: 03/18/2009 15:23
 Run Date: 03/20/2009 18:49
 File ID: 10M71245

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	100	25.0
Benzene	71-43-2		U	10.0	1.25
Bromobenzene	108-86-1		U	10.0	1.25
Bromochloromethane	74-97-5		U	10.0	2.00
Bromodichloromethane	75-27-4		U	10.0	2.50
Bromoform	75-25-2		U	10.0	5.00
Bromomethane	74-83-9		U	10.0	5.00
2-Butanone	78-93-3		U	100	25.0
n-Butylbenzene	104-51-8		U	10.0	2.50
sec-Butylbenzene	135-98-8		U	10.0	2.50
tert-Butylbenzene	98-06-6		U	10.0	2.50
Carbon disulfide	75-15-0		U	10.0	5.00
Carbon tetrachloride	56-23-5		U	10.0	2.50
Chlorobenzene	108-90-7		U	10.0	1.25
Chlorodibromomethane	124-48-1		U	10.0	2.50
Chloroethane	75-00-3		U	10.0	5.00
2-Chloroethyl vinyl ether	110-75-8		U	100	20.0
Chloroform	67-66-3		U	10.0	1.25
Chloromethane	74-87-3		U	10.0	2.50
2-Chlorotoluene	95-49-8		U	10.0	1.25
4-Chlorotoluene	106-43-4		U	10.0	2.50
1,2-Dibromo-3-chloropropane	96-12-8		U	50.0	10.0
1,2-Dibromoethane	106-93-4		U	10.0	2.50
Dibromomethane	74-95-3		U	10.0	2.50
1,2-Dichlorobenzene	95-50-1		U	10.0	1.25
1,3-Dichlorobenzene	541-73-1		U	10.0	2.50
1,4-Dichlorobenzene	106-46-7		U	10.0	1.25
Dichlorodifluoromethane	75-71-8		U	10.0	2.50
1,1-Dichloroethane	75-34-3		U	10.0	1.25
1,2-Dichloroethane	107-06-2	29.6		10.0	2.50
1,1-Dichloroethene	75-35-4	43.2		10.0	5.00
cis-1,2-Dichloroethene	156-59-2	9500	I	10.0	2.50
trans-1,2-Dichloroethene	156-60-5	24.0		10.0	2.50
1,2-Dichloropropane	78-87-5		U	10.0	2.00
1,3-Dichloropropane	142-28-9		U	10.0	2.00
2,2-Dichloropropane	594-20-7		U	10.0	2.50
cis-1,3-Dichloropropene	10061-01-5		U	10.0	2.50
trans-1,3-Dichloropropene	10061-02-6		U	10.0	5.00
1,1-Dichloropropene	563-58-6		U	10.0	2.50
Ethylbenzene	100-41-4		U	10.0	2.50
2-Hexanone	591-78-6		U	100	25.0
Hexachlorobutadiene	87-68-3		U	10.0	2.50
Isopropylbenzene	98-82-8		U	10.0	2.50
p-Isopropyltoluene	99-87-6		U	10.0	2.50
4-Methyl-2-pentanone	108-10-1		U	100	25.0
Methylene chloride	75-09-2		U	50.0	2.50
Naphthalene	91-20-3		U	10.0	2.00
n-Propylbenzene	103-65-1		U	10.0	1.25
Styrene	100-42-5		U	10.0	1.25
1,1,1,2-Tetrachloroethane	630-20-6		U	10.0	2.50
1,1,2,2-Tetrachloroethane	79-34-5		U	10.0	1.25
Tetrachloroethene	127-18-4		U	10.0	2.50
Toluene	108-88-3		U	10.0	2.50
1,2,3-Trichlorobenzene	87-61-6		U	10.0	1.50
1,2,4-Trichlorobenzene	120-82-1		U	10.0	2.00
1,1,1-Trichloroethane	71-55-6		U	10.0	2.50
1,1,2-Trichloroethane	79-00-5		U	10.0	2.50
Trichloroethene	79-01-6	14200	I	10.0	2.50
Trichlorofluoromethane	75-69-4		U	10.0	2.50

Sample Number: **L09030427-05**
 Client ID: **16WW16-031709**
 Matrix: **Water**
 Workgroup Number: **WG297819**
 Collect Date: **03/17/2009 14:35**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **10**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/20/2009 18:49**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/20/2009 18:49**
 File ID: **10M71245**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	10.0	5.00
1,2,4-Trimethylbenzene	95-63-6		U	10.0	2.50
1,3,5-Trimethylbenzene	108-67-8		U	10.0	2.50
Vinyl acetate	108-05-4		U	100	25.0
Vinyl chloride	75-01-4	564		10.0	2.50
o-Xylene	95-47-6		U	10.0	2.50
m-,p-Xylene	136777-61-2		U	10.0	5.00
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	70.0	86	118	*	
1,2-Dichloroethane-d4	99.8	80	120		
Toluene-d8	110	88	110		
4-Bromofluorobenzene	87.2	86	115		

U Not detected at or above adjusted sample detection limit

* Surrogate or spike compound out of range

I Semiquantitative result (out of instrument calibration range)

Sample Number: L09030427-11
Client ID: TRIP BLANK
Matrix: Water
Workgroup Number: WG297941
Collect Date: 03/18/2009 00:01
Sample Tag: 01

PrePrep Method: NONE
Prep Method: 5030B
Analytical Method: 8260B
Analyst: TMB
Dilution: 1
Units: ug/L

Instrument: HPMS10
Prep Date: 03/23/2009 13:10
Cal Date: 03/18/2009 15:23
Run Date: 03/23/2009 13:10
File ID: 10M71269

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

Sample Number: **L09030427-11**
 Client ID: **TRIP BLANK**
 Matrix: **Water**
 Workgroup Number: **WG297941**
 Collect Date: **03/18/2009 00:01**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/23/2009 13:10**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/23/2009 13:10**
 File ID: **10M71269**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	119	86	118	*	
1,2-Dichloroethane-d4	103	80	120		
Toluene-d8	99.5	88	110		
4-Bromofluorobenzene	89.1	86	115		

U Not detected at or above adjusted sample detection limit
 * Surrogate or spike compound out of range

2.1.1.2 QC Summary Data

Example 8260 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = [(Ax) (Cis)] / [(Ais) (Cx)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured:	3399156
Cis = Concentration of the specific internal standard (ug/mL)	25
Ais = Area of the characteristic ion of the specific internal standard	846471
Cx = Concentration of the compound in the standard being measured (ug/mL)	100

RF = Calculated Response Factor **1.0039**

2.0 Calculating the concentration (C) of a compound in water using the average RF: *

$$Cx = [(Ax) (Cis) (Vn)(D)] / [(Ais) (RF) (Vs)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Vs = Purge volume of sample (mL)	10
Vn = Nominal purge volume of sample (mL) (10.0 mL)	10
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

3.0 Calculating the concentration (C) of a compound in soil using the average RF: *

$$Cx = [(Ax) (Cis) (Wn)(D)] / [(Ais) (RF) (Ws)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Ws = Weight of sample purged (g)	5
Wn = Nominal purge weight (g) (5.0 g)	5
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

Dry weight correction:

Percent solids (PCT_S)	50
Cd = (Cx) (100)/PCT_S	254.4856

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, $y = mx + b$

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve = 0.213

b = intercept from curve = - 0.00642

Step 2: Calculate y from Quantitation Report

$$y = 86550/593147 = 0.1459$$

Step 3: Solve for x

$$x = (y - b)/m = [(0.1459 - (-0.00642))/0.213] = 0.7152$$

Step 4: Solve for analyte concentration Cx

$$Cx = Cis (x) = (25.0)(0.7152) = 17.88$$

Example Spreadsheet Calculation:

Slope from curve, m:	0.213
Intercept from curve, b:	-0.00642
Area of analyte, Ax:	86550
Area of Internal Standard, Ais:	593147
Concentration of IS, Cis	25.00
Response Ratio:	0.145917
Amount Ratio:	0.715195
Concentration:	17.87988
Units of Internal Standard:	ug/L

5.0 Concentration from Quadratic Regression**Step 1 - Retrieve Curve Data from Plot, $y = Ax^2 + Bx + C$**

Where:

$$Ax^2 + Bx + (C - y) = 0$$

A, B, C = constants from the ICAL quadratic regression

y = Response ratio = Area of analyte/Area of internal standard (IS)

x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

$$y = Ax/Ais$$

Step 3: Solve for x using the quadratic formula

$$Ax^2 + Bx + C - y = 0$$

$$x = \frac{b \pm \sqrt{(b^2 - 4a(c - y))}}{2a} \quad (\text{Two possible solutions})$$

Step 4: Solve for analyte concentration Cx

$$Cx = (Cis)(\text{Amount ratio})$$

Example Spreadsheet Calculation:

Value of A from plot:	-0.00629
Value of B from plot:	0.511
Value of C from plot:	-0.0276
Area of unknown from quantitation report:	293821
Area of IS from quantitation report:	784848
Response ratio, y:	0.374367
C - y:	-0.40197
Root 1 - Computed amount ratio, X1:	80.44567
Root 2 - Computed amount ratio, X2:	0.794396 use this solution
Concentration of IS, Cis:	25.00
Concentration of analyte, Cx:	19.86 ug/L

Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031809
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28031

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297559

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71171	SYSTEM BLANK	NA	1	1		03/18/09 07:43
2	10M71172	SYSTEM BLANK	NA	1	1		03/18/09 08:17
3	10M71173	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 08:47
4	10M71174	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 09:00
5	10M71175	WG297559-02 0.3ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:26
6	10M71176	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:58
7	10M71177	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 10:31
8	10M71178	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:03
9	10M71179	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:36
10	10M71180	WG297559-05 2ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:08
11	10M71181	WG297559-06 5ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:40
12	10M71182	WG297559-07 20ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:13
13	10M71183	WG297559-08 50ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:45
14	10M71184	WG297559-09 100ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:17
15	10M71185	WG297559-10 200ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:50
16	10M71186	WG297559-11 300ug/L STD 8260	NA	1	1	STD31848	03/18/09 15:23
17	10M71187	SYSTEM BLANK	NA	1	1		03/18/09 15:55
18	10M71188	SYSTEM BLANK	NA	1	1		03/18/09 16:27
19	10M71189	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/18/09 16:58
20	10M71190	SYSTEM BLANK	NA	1	1		03/18/09 17:30

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X			
File ID: 10M71173				
Tune failed. DNR.				
6	X			
File ID: 10M71176				
No secondary for 123-TCB. DNR.				
9	X			
File ID: 10M71179				
Idomethane didn't show up at all. DNR.				

Approved:



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71192	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 12:01
2	10M71193	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 12:27
3	10M71194	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 13:04
4	10M71195	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 13:36
5	10M71196	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 14:04
6	10M71197	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 14:28
7	10M71198	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 15:01
8	10M71199	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 15:25
9	10M71200	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 15:57
10	10M71201	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 16:33
11	10M71202	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/19/09 17:05
12	10M71203	WG297551-02 20ug/L LCS STD 8260	NA	1	1	STD31819	03/19/09 17:38
13	10M71204	L09030379-13 A 826-SPE	<2	1	1		03/19/09 18:10
14	10M71205	L09030379-01 A 826-SPE	4	1	1		03/19/09 18:42
15	10M71206	L09030379-02 A 826-SPE	5	1	1		03/19/09 19:15
16	10M71207	L09030379-03 A 826-SPE	<2	1	1		03/19/09 19:47
17	10M71208	L09030379-04 A 826-SPE	5	1	1		03/19/09 20:19
18	10M71209	L09030379-05 A 826-SPE	<2	1	1		03/19/09 20:52
19	10M71210	L09030379-06 A 826-SPE	4	1	1		03/19/09 21:24
20	10M71211	L09030379-07 A 826-SPE	5	1	1		03/19/09 21:56
21	10M71212	L09030379-08 A 826-SPE	4	1	1		03/19/09 22:29
22	10M71213	L09030379-09 A MS 826-SPE	3	1	1	STD31819	03/19/09 23:01
23	10M71214	L09030379-10 A MSD 826-SPE	3	1	1	STD31819	03/19/09 23:33
24	10M71215	L09030379-11 A 826-SPE	4	1	1		03/20/09 00:05
25	10M71216	L09030379-12 A 2X 826-SPE	5	1	2		03/20/09 00:38
26	10M71217	L09030379-14 A 826-SPE	7	1	1		03/20/09 01:10
27	10M71218	L09030379-15 A 826-SPE	7	1	1		03/20/09 01:43
28	10M71219	L09030379-16 A 826-SPE	<2	1	1		03/20/09 02:15
29	10M71220	L09030379-17 A 826-SPE	7	1	1		03/20/09 02:48
30	10M71221	SYSTEM BLANK	NA	1	1		03/20/09 03:21
31	10M71222	SYSTEM BLANK	NA	1	1		03/20/09 03:53

Comments

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Over Linear Range	VC
File ID: 10M71193				
VC was low. DNR.				
3	X		Over Linear Range	
File ID: 10M71194				
VC was low. DNR.				
4	X	1	Carry-over contamination	
File ID: 10M71195				
DNR.				
6	X		Over Linear Range	
File ID: 10M71197				
VC was low. DNR.				
9	X	1	Carry-over contamination	
File ID: 10M71200				
DNR.				
14	X	5	Over Calibration Range	2-BUT
File ID: 10M71205				
15	X	10	Over Calibration Range	2-BUT
File ID: 10M71206				
16	X	10	Over Calibration Range	2-BUT
File ID: 10M71207				
17	X	50	Over Calibration Range	2-BUT
File ID: 10M71208				
18	X	1	Carry-over contamination	
File ID: 10M71209				
DNR.				
19	X	10	Over Calibration Range	2-BUT
File ID: 10M71210				
20	X	10	Over Calibration Range	2-BUT
File ID: 10M71211				

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21	X	10	Over Calibration Range	2-BUT
File ID: 10M71212				
24	X	5	Over Calibration Range	2-BUT
File ID: 10M71215				
25	X	10	Over Calibration Range	2-BUT
File ID: 10M71216				
26	X	10	Over Calibration Range	2-BUT
File ID: 10M71217				
27	X	1	Carry-over contamination	
File ID: 10M71218				
DNR.				
28	X	1	Surrogate standard failure	
File ID: 10M71219				
DNR.				
29	X	10	Over Calibration Range	2-BUT
File ID: 10M71220				

Approved: March 23, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 032009
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28070

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297819

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71224	SYSTEM BLANK	NA	1	1		03/20/09 07:39
2	10M71225	WG297818-01 50ng BFB STD 8260	NA	1	1	STD31709	03/20/09 08:11
3	10M71226	WG297818-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/20/09 08:35
4	10M71227	WG297819-01 VBLK0320 BLANK STD 826	NA	1	1		03/20/09 09:08
5	10M71228	WG297819-01 VBLK0320 BLANK STD 826	NA	1	1		03/20/09 09:40
6	10M71229	WG297819-02 20ug/L LCS STD 8260	NA	1	1	STD31819	03/20/09 10:12
7	10M71230	WG297819-03 20ug/L LCSDUP STD 8260	NA	1	1	STD31819	03/20/09 10:44
8	10M71231	L09030341-15 A 826-SPE	<2	1	1		03/20/09 11:17
9	10M71232	L09030343-09 A 8260	<2	1	1		03/20/09 11:49
10	10M71233	L09030393-01 A 826-SPE	<2	1	1		03/20/09 12:21
11	10M71234	L09030393-04 A 826-SPE	<2	1	1		03/20/09 12:54
12	10M71235	L09030341-05 A 826-SPE	<2	1	1		03/20/09 13:26
13	10M71236	L09030341-06 A 826-SPE	<2	1	1		03/20/09 13:59
14	10M71237	L09030343-01 A 8260	<2	1	1		03/20/09 14:31
15	10M71238	L09030343-03 A 8260	<2	1	1		03/20/09 15:03
16	10M71239	L09030343-05 A 8260	<2	1	1		03/20/09 15:36
17	10M71240	L09030343-06 A 8260	<2	1	1		03/20/09 16:08
18	10M71241	L09030343-07 A 8260	<2	1	1		03/20/09 16:40
19	10M71242	L09030313-21 10X 826-TC	NA	17	10		03/20/09 17:13
20	10M71243	L09030313-23 10X 826-TC	NA	17	10		03/20/09 17:45
21	10M71244	L09030313-24 10X 826-TC	NA	17	10		03/20/09 18:17
22	10M71245	L09030427-03 100X 826-LOW	<2	1	100		03/20/09 18:49
23	10M71246	L09030427-05 10X 826-LOW	<2	1	10		03/20/09 19:22
24	10M71247	L09030406-05 10000X 8260	7	12	10000		03/20/09 19:54
25	10M71248	SYSTEM BLANK	NA	1	1		03/20/09 20:26
26	10M71249	SYSTEM BLANK	NA	1	1		03/20/09 20:58
27	10M71250	SYSTEM BLANK	NA	1	1		03/20/09 21:31
28	10M71251	SYSTEM BLANK	NA	1	1		03/20/09 22:03
29	10M71252	L09030120-01 A 826-REF-BLK	<2	1	1		03/20/09 22:35
30	10M71253	L09030120-02 A 826-REF-BLK	<2	1	1		03/20/09 23:07
31	10M71254	L09030120-03 A 826-REF-BLK	<2	1	1		03/20/09 23:40
32	10M71255	L09030120-04 A 826-REF-BLK	<2	1	1		03/21/09 00:12
33	10M71256	L09030120-05 A 826-REF-BLK	<2	1	1		03/21/09 00:44

Approved: March 24, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 032009
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 12
Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28070

Internal Standard: STD31494 Surrogate Standard: STD31691
CCV: STD31848 LCS: STD31819 MS/MSD: NA
Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG297819

Comments: Comments

Seq.	Rerun	Dil.	Reason	Analytes
4	X	1	Carry-over contamination	
File ID: 10M71227				
DNR.				
22	X	250	Over Calibration Range	CIS12DCE, TCE
File ID: 10M71245				
23	X	1	Analyzed too dilute	
File ID: 10M71246				
DNR.				

Approved: March 24, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 032309
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28095

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297941

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71258	SYSTEM BLANK	NA	1	1		03/23/09 07:27
2	10M71259	SYSTEM BLANK	NA	1	1		03/23/09 08:00
3	10M71260	WG297940-01 50ng BFB STD 8260	NA	1	1	STD31709	03/23/09 08:26
4	10M71261	WG297940-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/23/09 08:51
5	10M71262	WG297941-01 VBLK0323 BLANK STD 826	NA	1	1		03/23/09 09:23
6	10M71263	WG297941-01 VBLK0323 BLANK STD 826	NA	1	1		03/23/09 09:56
7	10M71264	WG297941-02 20ug/L LCS STD 8260	NA	1	1	STD31819	03/23/09 10:28
8	10M71265	WG297941-03 20ug/L LCSDUP STD 8260	NA	1	1	STD31819	03/23/09 11:01
9	10M71266	WG297941-04 FBLK STD 8260	NA	1	1		03/23/09 11:33
10	10M71267	L09030428-02 A 826-SPE	<2	1	1		03/23/09 12:05
11	10M71268	L09030438-08 A 826-SPE	<2	1	1		03/23/09 12:37
12	10M71269	L09030427-11 A 826-LOW	<2	1	1		03/23/09 13:10
13	10M71270	L09030468-20 A 826-LOW	<2	1	1		03/23/09 13:42
14	10M71271	L09030427-03 B 826-LOW	<2	1	1		03/23/09 14:15
15	10M71272	L09030427-05 B 250X 826-LOW	<2	1	250		03/23/09 14:47
16	10M71273	L09030468-08 A 826-LOW	<2	1	1		03/23/09 15:19
17	10M71274	L09030468-09 A 826-LOW	<2	1	1		03/23/09 15:52
18	10M71275	L09030468-10 A 826-LOW	<2	1	1		03/23/09 16:24
19	10M71276	L09030386-01 10X 826-TC	NA	17	10		03/23/09 16:56
20	10M71278	L09030421-01 10X 826-TC	NA	17	10		03/23/09 17:29
21	10M71279	L09030452-02 A 250X 826-LOW	7	1	250		03/23/09 18:01
22	10M71280	L09030468-17 A 100X 826-LOW	<2	1	100		03/23/09 18:34
23	10M71281	L09030468-18 A 100X 826-LOW	<2	1	100		03/23/09 19:06
24	10M71282	L09030468-19 A 2000X 826-LOW	<2	1	2000		03/23/09 19:39
25	10M71283	L09030428-01 A 826-SPE	<2	1	1		03/24/09 07:13
26	10M71284	SYSTEM BLANK	NA	1	1		03/24/09 07:46

Comments

Seq.	Rerun	Dil.	Reason	Analytes
5	X	1	Carry-over contamination	
File ID: 10M71262				
DNR.				
20	X	10	Surrogate standard failure	

Approved: March 25, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 032309
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28095

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297941

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 10M71278				
DNR.				
22	X	10	Analyzed too dilute	
File ID: 10M71280				
DNR.				
23	X	10	Analyzed too dilute	
File ID: 10M71281				
DNR.				
25	X	1	Missed Tune	
File ID: 10M71283				
DNR.				

Approved: March 25, 2009

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Microbac Laboratories Inc.

Data Checklist

Date: 18-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27121

Analytical Workgroups: WG297559

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the reasonableness of the results	

Primary Reviewer:
19-MAR-2009

Tiffany Bailey

Secondary Reviewer:

Microbac Laboratories Inc.

Data Checklist

Date: 19-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27161

Analytical Workgroups: WG297551

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
20-MAR-2009

Tiffany Bailey

Secondary Reviewer:
23-MAR-2009

MDA

Microbac Laboratories Inc.

Data Checklist

Date: 20-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27181

Analytical Workgroups: WG297819

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
23-MAR-2009

Tiffany Bailey

Secondary Reviewer:
24-MAR-2009

MDA

Microbac Laboratories Inc.

Data Checklist

Date: 23-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27210

Analytical Workgroups: WG297941

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
24-MAR-2009

Tiffany Bailey

Secondary Reviewer:
25-MAR-2009

MDA

Analytical Method: 8260B

AAB#: WG297819

Login Number: L09030427

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW16-031709	03/17/09	03/19/09	03/20/09	14	3.18	03/20/09	14	3.18	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Analytical Method: 8260B

AAB#: WG297941

Login Number: L09030427

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW32-031709	03/17/09	03/19/09	03/23/09	14	6.09	03/23/09	14	6.09	
16WW16-031709	03/17/09	03/19/09	03/23/09	14	6.01	03/23/09	14	6.01	
TRIP BLANK	03/18/09	03/19/09	03/23/09	14	5.55	03/23/09	14	5.55	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Login Number: L09030427
Instrument Id: HPMS10
Workgroup (AAB#): WG297819

Method: 8260
CAL ID: HPMS10 - 18-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030427-05	10.0	DL01	99.8	<u>70.0</u>	87.2	110
WG297819-01	1.00	01	100	116	89.7	99.6
WG297819-02	1.00	01	92.7	96.2	100	95.5
WG297819-03	1.00	01	94.9	99.7	100	94.9

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

Login Number: L09030427
Instrument Id: HPMS10
Workgroup (AAB#): WG297941

Method: 8260
CAL ID: HPMS10 - 18-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030427-03	1.00	01	102	<u>121</u>	90.4	99.4
L09030427-05	250	DL02	104	118	88.9	99.7
L09030427-11	1.00	01	103	<u>119</u>	89.1	99.5
WG297941-01	1.00	01	99.6	117	88.8	100
WG297941-02	1.00	01	96.7	96.5	104	94.4
WG297941-03	1.00	01	94.2	98.4	96.4	96.1
WG297941-04	1.00	01	104	<u>119</u>	90.4	102

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

METHOD BLANK SUMMARY

Login Number:	<u>L09030427</u>	Work Group:	<u>WG297819</u>
Blank File ID:	<u>10M71228</u>	Blank Sample ID:	<u>WG297819-01</u>
Prep Date:	<u>03/20/09 09:40</u>	Instrument ID:	<u>HPMS10</u>
Analyzed Date:	<u>03/20/09 09:40</u>	Method:	<u>8260B</u>
Analyst:	<u>TMB</u>		

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG297819-02	10M71229	03/20/09 10:12	01
LCS2	WG297819-03	10M71230	03/20/09 10:44	01
16WW16-031709	L09030427-05	10M71245	03/20/09 18:49	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 1351338
Report generated 03/26/2009 14:56



METHOD BLANK SUMMARY

Login Number: L09030427
 Blank File ID: 10M71263
 Prep Date: 03/23/09 09:56
 Analyzed Date: 03/23/09 09:56
 Analyst: TMB

Work Group: WG297941
 Blank Sample ID: WG297941-01
 Instrument ID: HPMS10
 Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG297941-02	10M71264	03/23/09 10:28	01
LCS2	WG297941-03	10M71265	03/23/09 11:01	01
FBLK	WG297941-04	10M71266	03/23/09 11:33	01
TRIP BLANK	L09030427-11	10M71269	03/23/09 13:10	01
16WW32-031709	L09030427-03	10M71271	03/23/09 14:15	01
16WW16-031709	L09030427-05	10M71272	03/23/09 14:47	DL02

Report Name: BLANK_SUMMARY
 PDF File ID: 1351338
 Report generated 03/26/2009 14:56



Login Number: L09030427 Prep Date: 03/20/09 09:40 Sample ID: WG297819-01
Instrument ID: HPMS10 Run Date: 03/20/09 09:40 Prep Method: 5030B
File ID: 10M71228 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG297819 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1351339

26-MAR-2009 14:56



Login Number: L09030427 Prep Date: 03/20/09 09:40 Sample ID: WG297819-01
Instrument ID: HPMS10 Run Date: 03/20/09 09:40 Prep Method: 5030B
File ID: 10M71228 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG297819 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	116	86 - 118	PASS
1,2-Dichloroethane-d4	100	80 - 120	PASS
Toluene-d8	99.6	88 - 110	PASS
4-Bromofluorobenzene	89.7	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1351339
26-MAR-2009 14:56



Login Number: L09030427 Prep Date: 03/23/09 09:56 Sample ID: WG297941-01
Instrument ID: HPMS10 Run Date: 03/23/09 09:56 Prep Method: 5030B
File ID: 10M71263 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG297941 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK
PDF ID: 1351339
26-MAR-2009 14:56



Login Number: L09030427 Prep Date: 03/23/09 09:56 Sample ID: WG297941-01
Instrument ID: HPMS10 Run Date: 03/23/09 09:56 Prep Method: 5030B
File ID: 10M71263 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG297941 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	117	86 - 118	PASS
1,2-Dichloroethane-d4	99.6	80 - 120	PASS
Toluene-d8	100	88 - 110	PASS
4-Bromofluorobenzene	88.8	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1351339
26-MAR-2009 14:56



Login Number: L09030427 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG297819 Units: ug/L
QC Key: STD Lot #: STD31819

Sample ID: WG297819-02 LCS File ID: 10M71229 Run Date: 03/20/2009 10:12
Sample ID: WG297819-03 LCS2 File ID: 10M71230 Run Date: 03/20/2009 10:44

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	22.1	110	20.0	24.6	123	10.7	40 - 142	20	
Benzene	20.0	20.5	102	20.0	20.5	102	0.0274	80 - 121	20	
Bromobenzene	20.0	22.1	111	20.0	22.6	113	2.31	80 - 120	20	
Bromochloromethane	20.0	20.3	102	20.0	20.6	103	1.23	65 - 130	20	
Bromodichloromethane	20.0	21.4	107	20.0	21.5	107	0.464	80 - 131	20	
Bromoform	20.0	20.5	102	20.0	21.7	109	5.85	70 - 130	20	
Bromomethane	20.0	20.7	103	20.0	20.3	102	1.81	30 - 145	20	
2-Butanone	20.0	29.6	148	20.0	32.8	164	10.2	30 - 150	20	*
n-Butylbenzene	20.0	22.0	110	20.0	21.9	109	0.458	80 - 131	20	
sec-Butylbenzene	20.0	22.5	112	20.0	22.9	114	1.66	80 - 127	20	
tert-Butylbenzene	20.0	17.9	89.5	20.0	18.5	92.6	3.41	80 - 126	20	
Carbon disulfide	20.0	19.6	97.9	20.0	20.3	101	3.50	58 - 138	20	
Carbon tetrachloride	20.0	20.3	101	20.0	20.8	104	2.77	65 - 140	20	
Chlorobenzene	20.0	20.5	103	20.0	20.6	103	0.192	80 - 120	20	
Chlorodibromomethane	20.0	19.5	97.7	20.0	20.2	101	3.22	60 - 135	20	
Chloroethane	20.0	24.2	121	20.0	22.9	115	5.21	60 - 135	20	
2-Chloroethyl vinyl ether	20.0	20.0	99.8	20.0	21.0	105	4.91	58 - 151	20	
Chloroform	20.0	20.1	101	20.0	20.2	101	0.622	80 - 125	20	
Chloromethane	20.0	19.0	95.1	20.0	18.5	92.6	2.61	40 - 125	20	
2-Chlorotoluene	20.0	22.0	110	20.0	21.8	109	1.24	80 - 127	20	
4-Chlorotoluene	20.0	20.6	103	20.0	20.5	103	0.160	80 - 126	20	
1,2-Dibromo-3-chloropropane	20.0	20.5	103	20.0	23.1	116	12.0	50 - 130	20	
1,2-Dibromoethane	20.0	19.1	95.5	20.0	19.8	98.9	3.59	80 - 125	20	
Dibromomethane	20.0	21.1	106	20.0	21.6	108	2.29	75 - 125	20	
1,2-Dichlorobenzene	20.0	21.0	105	20.0	20.9	104	0.480	80 - 125	20	
1,3-Dichlorobenzene	20.0	21.5	107	20.0	21.5	108	0.283	80 - 120	20	
1,4-Dichlorobenzene	20.0	19.7	98.4	20.0	19.5	97.7	0.667	80 - 120	20	
Dichlorodifluoromethane	20.0	23.8	119	20.0	23.7	118	0.531	50 - 133	20	
1,1-Dichloroethane	20.0	20.3	101	20.0	20.4	102	0.366	80 - 125	20	
1,2-Dichloroethane	20.0	20.3	101	20.0	21.0	105	3.44	80 - 129	20	
1,1-Dichloroethene	20.0	21.0	105	20.0	21.4	107	1.62	80 - 132	20	
cis-1,2-Dichloroethene	20.0	21.0	105	20.0	21.6	108	2.82	70 - 125	20	
trans-1,2-Dichloroethene	20.0	20.4	102	20.0	20.9	104	2.36	80 - 127	20	
1,2-Dichloropropane	20.0	20.1	101	20.0	20.6	103	2.11	80 - 120	20	
1,3-Dichloropropane	20.0	19.4	96.9	20.0	19.3	96.3	0.557	80 - 120	20	
2,2-Dichloropropane	20.0	19.6	98.2	20.0	19.5	97.4	0.794	80 - 133	20	
cis-1,3-Dichloropropene	20.0	20.3	102	20.0	21.3	106	4.50	70 - 130	20	
trans-1,3-Dichloropropene	20.0	16.6	82.8	20.0	17.2	86.0	3.81	80 - 130	20	
1,1-Dichloropropene	20.0	21.2	106	20.0	20.8	104	1.92	75 - 130	20	
Ethylbenzene	20.0	21.4	107	20.0	21.7	108	1.33	80 - 122	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1348812
Report generated: 03/26/2009 14:56



Login Number: L09030427 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG297819 Units: ug/L
QC Key: STD Lot #: STD31819

Sample ID: WG297819-02 LCS File ID: 10M71229 Run Date: 03/20/2009 10:12
Sample ID: WG297819-03 LCS2 File ID: 10M71230 Run Date: 03/20/2009 10:44

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2-Hexanone	20.0	21.6	108	20.0	25.0	125	14.7	55 - 130	20	
Hexachlorobutadiene	20.0	25.0	125	20.0	24.7	124	1.07	72 - 132	20	
Isopropylbenzene	20.0	16.6	82.9	20.0	17.1	85.6	3.27	80 - 122	20	
p-Isopropyltoluene	20.0	21.7	108	20.0	21.3	106	1.87	80 - 122	20	
4-Methyl-2-pentanone	20.0	21.6	108	20.0	23.9	120	10.4	64 - 140	20	
Methylene chloride	20.0	21.6	108	20.0	21.4	107	0.849	80 - 123	20	
Naphthalene	20.0	24.2	121	20.0	26.2	131	7.65	59 - 149	20	
n-Propylbenzene	20.0	19.9	99.5	20.0	19.8	99.0	0.505	80 - 129	20	
Styrene	20.0	20.4	102	20.0	20.3	101	0.410	80 - 123	20	
1,1,1,2-Tetrachloroethane	20.0	18.4	91.8	20.0	18.1	90.3	1.70	80 - 130	20	
1,1,2,2-Tetrachloroethane	20.0	19.1	95.4	20.0	21.1	106	10.1	79 - 125	20	
Tetrachloroethene	20.0	20.4	102	20.0	20.1	100	1.44	80 - 124	20	
Toluene	20.0	20.5	103	20.0	20.5	102	0.422	80 - 124	20	
1,2,3-Trichlorobenzene	20.0	21.8	109	20.0	22.3	111	2.07	55 - 140	20	
1,2,4-Trichlorobenzene	20.0	25.2	126	20.0	25.1	126	0.163	65 - 135	20	
1,1,1-Trichloroethane	20.0	20.4	102	20.0	20.4	102	0.387	80 - 134	20	
1,1,2-Trichloroethane	20.0	19.9	99.4	20.0	20.0	100	0.665	80 - 125	20	
Trichloroethene	20.0	21.3	107	20.0	21.1	105	1.39	80 - 122	20	
Trichlorofluoromethane	20.0	20.9	104	20.0	21.0	105	0.716	62 - 151	20	
1,2,3-Trichloropropane	20.0	20.6	103	20.0	21.5	107	4.09	75 - 125	20	
1,2,4-Trimethylbenzene	20.0	23.0	115	20.0	23.0	115	0.256	80 - 125	20	
1,3,5-Trimethylbenzene	20.0	21.1	106	20.0	21.1	106	0.122	80 - 127	20	
Vinyl acetate	20.0	17.5	87.5	20.0	18.5	92.6	5.63	10 - 150	20	
Vinyl chloride	20.0	20.0	100	20.0	19.6	97.8	2.34	65 - 140	20	
o-Xylene	20.0	20.4	102	20.0	20.3	102	0.364	80 - 122	20	
m-, p-Xylene	40.0	40.4	101	40.0	40.4	101	0.0593	80 - 122	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	92.7	94.9	80 - 120	PASS
Dibromofluoromethane	96.2	99.7	86 - 118	PASS
4-Bromofluorobenzene	100	100	86 - 115	PASS
Toluene-d8	95.5	94.9	88 - 110	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1348812
Report generated: 03/26/2009 14:56



Login Number: L09030427 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG297941 Units: ug/L
QC Key: STD Lot #: STD31819

Sample ID: WG297941-02 LCS File ID: 10M71264 Run Date: 03/23/2009 10:28
Sample ID: WG297941-03 LCS2 File ID: 10M71265 Run Date: 03/23/2009 11:01

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	26.3	132	20.0	23.7	118	10.6	40 - 142	20	
Benzene	20.0	20.4	102	20.0	20.6	103	0.884	80 - 121	20	
Bromobenzene	20.0	22.5	113	20.0	21.8	109	3.39	80 - 120	20	
Bromochloromethane	20.0	21.2	106	20.0	20.5	103	3.10	65 - 130	20	
Bromodichloromethane	20.0	21.8	109	20.0	21.5	107	1.25	80 - 131	20	
Bromoform	20.0	21.1	105	20.0	20.3	101	3.83	70 - 130	20	
Bromomethane	20.0	20.6	103	20.0	21.7	108	5.15	30 - 145	20	
2-Butanone	20.0	34.5	172	20.0	29.8	149	14.6	30 - 150	20	*
n-Butylbenzene	20.0	22.2	111	20.0	23.4	117	5.15	80 - 131	20	
sec-Butylbenzene	20.0	22.8	114	20.0	22.4	112	1.96	80 - 127	20	
tert-Butylbenzene	20.0	19.6	98.0	20.0	17.7	88.4	10.3	80 - 126	20	
Carbon disulfide	20.0	20.7	103	20.0	20.3	102	1.66	58 - 138	20	
Carbon tetrachloride	20.0	20.7	104	20.0	20.9	104	0.714	65 - 140	20	
Chlorobenzene	20.0	20.5	102	20.0	20.4	102	0.301	80 - 120	20	
Chlorodibromomethane	20.0	19.5	97.6	20.0	19.1	95.7	1.98	60 - 135	20	
Chloroethane	20.0	21.0	105	20.0	21.2	106	1.11	60 - 135	20	
2-Chloroethyl vinyl ether	20.0	22.1	110	20.0	19.9	99.6	10.2	58 - 151	20	
Chloroform	20.0	19.7	98.6	20.0	20.2	101	2.32	80 - 125	20	
Chloromethane	20.0	17.9	89.6	20.0	17.4	87.2	2.74	40 - 125	20	
2-Chlorotoluene	20.0	22.4	112	20.0	21.0	105	6.43	80 - 127	20	
4-Chlorotoluene	20.0	20.1	100	20.0	20.0	99.8	0.524	80 - 126	20	
1,2-Dibromo-3-chloropropane	20.0	22.5	113	20.0	18.2	90.8	21.4	50 - 130	20	#
1,2-Dibromoethane	20.0	19.4	97.1	20.0	18.8	94.1	3.10	80 - 125	20	
Dibromomethane	20.0	22.0	110	20.0	21.9	109	0.688	75 - 125	20	
1,2-Dichlorobenzene	20.0	20.8	104	20.0	20.1	100	3.68	80 - 125	20	
1,3-Dichlorobenzene	20.0	21.1	105	20.0	21.4	107	1.42	80 - 120	20	
1,4-Dichlorobenzene	20.0	19.3	96.3	20.0	19.2	96.2	0.134	80 - 120	20	
Dichlorodifluoromethane	20.0	21.2	106	20.0	21.3	107	0.680	50 - 133	20	
1,1-Dichloroethane	20.0	20.1	101	20.0	20.5	103	1.81	80 - 125	20	
1,2-Dichloroethane	20.0	21.0	105	20.0	20.4	102	2.92	80 - 129	20	
1,1-Dichloroethene	20.0	20.4	102	20.0	20.9	105	2.47	80 - 132	20	
cis-1,2-Dichloroethene	20.0	21.2	106	20.0	21.4	107	0.955	70 - 125	20	
trans-1,2-Dichloroethene	20.0	20.4	102	20.0	20.4	102	0.0226	80 - 127	20	
1,2-Dichloropropane	20.0	20.6	103	20.0	20.5	103	0.423	80 - 120	20	
1,3-Dichloropropane	20.0	19.2	96.0	20.0	18.6	93.2	2.94	80 - 120	20	
2,2-Dichloropropane	20.0	19.6	97.9	20.0	20.1	100	2.42	80 - 133	20	
cis-1,3-Dichloropropene	20.0	21.8	109	20.0	21.5	107	1.49	70 - 130	20	
trans-1,3-Dichloropropene	20.0	17.0	84.8	20.0	16.6	83.1	2.05	80 - 130	20	
1,1-Dichloropropene	20.0	20.5	102	20.0	21.0	105	2.58	75 - 130	20	
Ethylbenzene	20.0	21.4	107	20.0	20.5	102	4.52	80 - 122	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1348812
Report generated: 03/26/2009 14:56



Login Number: L09030427 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG297941 Units: ug/L
QC Key: STD Lot #: STD31819

Sample ID: WG297941-02 LCS File ID: 10M71264 Run Date: 03/23/2009 10:28
Sample ID: WG297941-03 LCS2 File ID: 10M71265 Run Date: 03/23/2009 11:01

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2-Hexanone	20.0	25.6	128	20.0	20.4	102	22.7	55 - 130	20	#
Hexachlorobutadiene	20.0	24.9	124	20.0	24.9	125	0.303	72 - 132	20	
Isopropylbenzene	20.0	17.2	86.1	20.0	14.6	72.8	16.7	80 - 122	20	*
p-Isopropyltoluene	20.0	21.5	107	20.0	21.8	109	1.30	80 - 122	20	
4-Methyl-2-pentanone	20.0	24.3	122	20.0	22.5	113	7.70	64 - 140	20	
Methylene chloride	20.0	21.0	105	20.0	21.0	105	0.132	80 - 123	20	
Naphthalene	20.0	23.9	119	20.0	22.1	110	7.75	59 - 149	20	
n-Propylbenzene	20.0	20.4	102	20.0	19.4	97.2	4.83	80 - 129	20	
Styrene	20.0	19.5	97.5	20.0	19.6	98.2	0.682	80 - 123	20	
1,1,1,2-Tetrachloroethane	20.0	18.0	89.8	20.0	18.3	91.6	2.07	80 - 130	20	
1,1,2,2-Tetrachloroethane	20.0	21.4	107	20.0	18.3	91.3	15.8	79 - 125	20	
Tetrachloroethene	20.0	19.4	97.0	20.0	20.0	99.8	2.83	80 - 124	20	
Toluene	20.0	20.4	102	20.0	20.7	104	1.61	80 - 124	20	
1,2,3-Trichlorobenzene	20.0	20.9	105	20.0	19.8	98.9	5.56	55 - 140	20	
1,2,4-Trichlorobenzene	20.0	25.2	126	20.0	24.6	123	2.62	65 - 135	20	
1,1,1-Trichloroethane	20.0	20.5	102	20.0	20.8	104	1.73	80 - 134	20	
1,1,2-Trichloroethane	20.0	19.4	97.0	20.0	19.3	96.3	0.711	80 - 125	20	
Trichloroethene	20.0	21.0	105	20.0	21.2	106	1.14	80 - 122	20	
Trichlorofluoromethane	20.0	20.2	101	20.0	20.6	103	2.13	62 - 151	20	
1,2,3-Trichloropropane	20.0	22.7	114	20.0	19.3	96.6	16.2	75 - 125	20	
1,2,4-Trimethylbenzene	20.0	23.0	115	20.0	23.4	117	1.60	80 - 125	20	
1,3,5-Trimethylbenzene	20.0	21.1	105	20.0	20.8	104	1.16	80 - 127	20	
Vinyl acetate	20.0	15.8	79.2	20.0	15.1	75.6	4.62	10 - 150	20	
Vinyl chloride	20.0	19.5	97.5	20.0	20.1	101	3.25	65 - 140	20	
o-Xylene	20.0	20.1	101	20.0	19.2	96.2	4.49	80 - 122	20	
m-, p-Xylene	40.0	39.8	99.5	40.0	38.6	96.4	3.12	80 - 122	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	96.7	94.2	80 - 120	PASS
Dibromofluoromethane	96.5	98.4	86 - 118	PASS
4-Bromofluorobenzene	104	96.4	86 - 115	PASS
Toluene-d8	94.4	96.1	88 - 110	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1348812
Report generated: 03/26/2009 14:56



BFB

Login Number: L09030427

Instrument: HPMS10

Analyst: TMB

Workgroup: WG297559

Tune ID: WG297559-01

Run Date: 03/18/2009

Run Time: 09:00

File ID: 10M71174

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.0	5747	PASS
75.0	95.0	30.0	60.0	47.9	10994	PASS
95.0	95.0	100	100	100	22949	PASS
96.0	95.0	5.00	9.00	6.91	1585	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	92.1	21128	PASS
175	174	5.00	9.00	7.12	1504	PASS
176	174	95.0	101	97.0	20489	PASS
177	176	5.00	9.00	7.42	1521	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-02	STD	01	03/18/2009 09:26	
WG297559-04	STD	01	03/18/2009 10:31	
WG297559-03	STD	01	03/18/2009 11:03	
WG297559-05	STD	01	03/18/2009 12:08	
WG297559-06	STD	01	03/18/2009 12:40	
WG297559-07	STD	01	03/18/2009 13:13	
WG297559-08	STD-CCV	01	03/18/2009 13:45	
WG297559-09	STD	01	03/18/2009 14:17	
WG297559-10	STD	01	03/18/2009 14:50	
WG297559-11	STD	01	03/18/2009 15:23	
WG297559-12	SSCV	01	03/18/2009 16:58	

* Sample past 12 hour tune limit

BFB

Login Number: L09030427
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297549

Tune ID: WG297549-01
Run Date: 03/19/2009
Run Time: 15:01
File ID: 10M71198

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	23.1	1728	PASS
75.0	95.0	30.0	60.0	50.1	3742	PASS
95.0	95.0	100	100	100	7467	PASS
96.0	95.0	5.00	9.00	6.19	462	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	91.9	6861	PASS
175	174	5.00	9.00	8.09	555	PASS
176	174	95.0	101	96.5	6621	PASS
177	176	5.00	9.00	7.34	486	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-12	SSCV	02	03/19/2009 17:05	

* Sample past 12 hour tune limit

BFB

Login Number: L09030427
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297818

Tune ID: WG297818-01
Run Date: 03/20/2009
Run Time: 08:11
File ID: 10M71225

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.9	4331	PASS
75.0	95.0	30.0	60.0	48.7	8490	PASS
95.0	95.0	100	100	100	17423	PASS
96.0	95.0	5.00	9.00	6.72	1171	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	90.2	15710	PASS
175	174	5.00	9.00	8.28	1301	PASS
176	174	95.0	101	100	15750	PASS
177	176	5.00	9.00	6.90	1087	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297818-02	CCV	01	03/20/2009 08:35	
WG297819-01	BLANK	01	03/20/2009 09:40	
WG297819-02	LCS	01	03/20/2009 10:12	
WG297819-03	LCS2	01	03/20/2009 10:44	
L09030427-05	16WW16-031709	DL01	03/20/2009 18:49	

* Sample past 12 hour tune limit

BFB

Login Number: L09030427
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297940

Tune ID: WG297940-01
Run Date: 03/23/2009
Run Time: 08:26
File ID: 10M71260

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.5	4513	PASS
75.0	95.0	30.0	60.0	48.1	8856	PASS
95.0	95.0	100	100	100	18398	PASS
96.0	95.0	5.00	9.00	7.48	1377	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	94.2	17327	PASS
175	174	5.00	9.00	8.03	1391	PASS
176	174	95.0	101	99.5	17245	PASS
177	176	5.00	9.00	6.41	1105	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297940-02	CCV	01	03/23/2009 08:51	
WG297941-01	BLANK	01	03/23/2009 09:56	
WG297941-02	LCS	01	03/23/2009 10:28	
WG297941-03	LCS2	01	03/23/2009 11:01	
WG297941-04	FBLK	01	03/23/2009 11:33	
L09030427-11	TRIP BLANK	01	03/23/2009 13:10	
L09030427-03	16WW32-031709	01	03/23/2009 14:15	
L09030427-05	16WW16-031709	DL02	03/23/2009 14:47	

* Sample past 12 hour tune limit

Login Number: L09030427
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.1883	3.35		
1,2-Dichloropropane	CCC	0.2703	4.94		
Chloroform	CCC	0.3958	7.78		
Ethylbenzene	CCC	0.3605	14.1		
Toluene	CCC	1.132	7.54		
Vinyl Chloride	CCC	0.2730	19.8		0.99900
1,1,2,2-Tetrachloroethane	SPCC	0.7145	16.4		0.99900
1,1-Dichloroethane	SPCC	0.4721	6.28		
Bromoform	SPCC	0.1797	11.2		
Chlorobenzene	SPCC	0.7377	4.82		
Chloromethane	SPCC	0.4126	5.93		
1,1,1,2-Tetrachloroethane		0.3618	13.8		
1,1,1-Trichloroethane		0.3354	4.49		
1,1,2-Trichloroethane		0.2312	14.7		
1,1-Dichloropropene		0.2958	5.90		
1,2,3-Trichlorobenzene		0.8396	16.0		1.00000
1,2,3-Trichloropropane		0.1970	19.8		0.99900
1,2,4-Trichlorobenzene		0.7553	14.7		
1,2,4-Trimethylbenzene		2.395	14.2		
1,2-Dibromo-3-Chloropropane		0.1166	16.2		0.99900
1,2-Dibromoethane		0.2259	13.6		
1,2-Dichlorobenzene		1.338	15.6	1.00000	
1,2-Dichloroethane		0.3045	5.19		
1,3,5-Trimethylbenzene		3.088	11.5		
1,3-Dichlorobenzene		1.174	8.64		
1,3-Dichloropropane		0.4061	14.2		
1,4-Dichlorobenzene		1.215	12.5		
2,2-Dichloropropane		0.3380	5.98		
2-Butanone		0.08153	5.47		
2-Chloroethyl Vinyl Ether		0.09620	26.8		1.00000
2-Chlorotoluene		2.102	12.3		
2-Hexanone		0.1322	7.49		
4-Chlorotoluene		1.554	10.8		
4-Methyl-2-Pentanone		0.06200	4.77		
Acetone		0.05288	11.2		
Benzene		0.8900	11.7		
Bromobenzene		0.7691	11.7		
Bromochloromethane		0.1104	5.81		
Bromodichloromethane		0.2693	3.29		
Bromomethane		0.1716	10.7		
Carbon Disulfide		0.6995	7.14		
Carbon Tetrachloride		0.2761	4.74		
Chloroethane		0.1223	7.92		
Dibromochloromethane		0.3035	14.0		
Dibromomethane		0.1134	4.65		

INT_CAL - Modified 03/06/2008
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Report generated 03/26/2009 14:56



Login Number: L09030427
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Dichlorodifluoromethane		0.2296	7.70		
Hexachlorobutadiene		0.4610	12.7		
Isopropylbenzene		1.233	6.54		
Methylene Chloride		0.3418	57.3	0.99900	
Naphthalene		1.213	13.6		
Styrene		0.5724	23.1		1.00000
Tetrachloroethene		0.2654	6.64		
Trichloroethene		0.2329	3.80		
Trichlorofluoromethane		0.3511	7.69		
Vinyl Acetate		0.4106	39.0		0.99800
cis-1,2-Dichloroethene		0.2353	3.88		
cis-1,3-Dichloropropene		0.2982	3.63		
m-,p-Xylene		0.4183	12.6		
n-Butylbenzene		1.578	12.3		
n-Propylbenzene		2.444	14.3		
o-Xylene		0.4523	8.26		
p-Isopropyltoluene		2.388	15.5		1.00000
sec-Butylbenzene		2.894	12.5		
tert-Butylbenzene		0.6459	13.8		
trans-1,2-Dichloroethene		0.2154	3.55		
trans-1,3-Dichloropropene		0.4012	15.0		

R = Correlation coefficient; 0.995 minimum
R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

Login Number: L09030427
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	2202.00000	0.1895	1.00	5391.00000	0.1825
1,2-Dichloropropane	NA	NA	NA	0.400	3447.00000	0.2967	1.00	7961.00000	0.2695
Chloroform	0.300	3765.00000	0.4221	0.400	5303.00000	0.4565	1.00	11678.0000	0.3954
Ethylbenzene	NA	NA	NA	0.400	2216.00000	0.3389	1.00	4956.00000	0.3082
Toluene	NA	NA	NA	0.400	8101.00000	1.239	1.00	17704.0000	1.101
Vinyl Chloride	NA	NA	NA	0.400	4209.00000	0.3623	1.00	8395.00000	0.2842
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	1867.00000	0.7911	1.00	4382.00000	0.7360
1,1-Dichloroethane	NA	NA	NA	0.400	5980.00000	0.5148	1.00	14353.0000	0.4859
Bromoform	NA	NA	NA	NA	NA	NA	1.00	2932.00000	0.1823
Chlorobenzene	NA	NA	NA	0.400	5231.00000	0.8000	1.00	11318.0000	0.7038
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	11928.0000	0.4038
1,1,1,2-Tetrachloroethane	NA	NA	NA	0.400	2590.00000	0.3961	1.00	6498.00000	0.4040
1,1,1-Trichloroethane	NA	NA	NA	0.400	4101.00000	0.3530	1.00	9575.00000	0.3242
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	1.00	3938.00000	0.2449
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7941.00000	0.2688
1,2,3-Trichlorobenzene	0.300	1998.00000	1.075	0.400	1820.00000	0.7712	1.00	4215.00000	0.7079
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	1.00	988.000000	0.1659
1,2,4-Trichlorobenzene	NA	NA	NA	0.400	1882.00000	0.7975	1.00	3520.00000	0.5912
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA	1.00	15067.0000	2.531
1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA	0.400	1481.00000	0.2265	1.00	4160.00000	0.2587
1,2-Dichlorobenzene	0.300	3433.00000	1.847	0.400	3104.00000	1.315	1.00	7574.00000	1.272
1,2-Dichloroethane	NA	NA	NA	0.400	3716.00000	0.3199	1.00	9055.00000	0.3066
1,3,5-Trimethylbenzene	NA	NA	NA	0.400	7819.00000	3.313	1.00	17996.0000	3.023
1,3-Dichlorobenzene	NA	NA	NA	0.400	2706.00000	1.147	1.00	6086.00000	1.022
1,3-Dichloropropane	NA	NA	NA	0.400	2928.00000	0.4478	1.00	7472.00000	0.4646
1,4-Dichlorobenzene	0.300	2921.00000	1.571	0.400	3078.00000	1.304	1.00	6987.00000	1.174
2,2-Dichloropropane	NA	NA	NA	0.400	4197.00000	0.3613	1.00	10617.0000	0.3594
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NA	NA	NA	0.400	5777.00000	2.448	1.00	12608.0000	2.118
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NA	NA	NA	0.400	3939.00000	1.669	1.00	7649.00000	1.285
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	13114.0000	1.129	1.00	26569.0000	0.8995
Bromobenzene	0.300	1718.00000	0.9242	0.400	1696.00000	0.7187	1.00	4142.00000	0.6957
Bromochloromethane	NA	NA	NA	0.400	1257.00000	0.1082	1.00	3455.00000	0.1170
Bromodichloromethane	NA	NA	NA	0.400	3178.00000	0.2736	1.00	7931.00000	0.2685
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	5192.00000	0.1758
Carbon Disulfide	NA	NA	NA	NA	NA	NA	1.00	21416.0000	0.7250
Carbon Tetrachloride	NA	NA	NA	0.400	3008.00000	0.2589	1.00	7989.00000	0.2705

INT_CAL - Modified 03/06/2008
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Login Number: L09030427
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	11388.0000	0.1885	5.00	30423.0000	0.1915	20.0	129120.000	0.1924
1,2-Dichloropropane	2.00	16354.0000	0.2707	5.00	44161.0000	0.2779	20.0	179925.000	0.2681
Chloroform	2.00	23569.0000	0.3901	5.00	63989.0000	0.4027	20.0	260617.000	0.3883
Ethylbenzene	2.00	9877.00000	0.2994	5.00	29075.0000	0.3171	20.0	181566.000	0.3766
Toluene	2.00	37280.0000	1.130	5.00	110456.000	1.205	20.0	568852.000	1.180
Vinyl Chloride	2.00	19052.0000	0.3153	5.00	46331.0000	0.2916	20.0	176450.000	0.2629
1,1,2,2-Tetrachloroethane	2.00	9114.00000	0.7433	5.00	26446.0000	0.8314	20.0	120640.000	0.7847
1,1-Dichloroethane	2.00	28294.0000	0.4683	5.00	78309.0000	0.4928	20.0	317741.000	0.4734
Bromoform	2.00	6657.00000	0.2018	5.00	18768.0000	0.2047	20.0	88251.0000	0.1831
Chlorobenzene	2.00	23414.0000	0.7098	5.00	66062.0000	0.7205	20.0	364419.000	0.7560
Chloromethane	2.00	28151.0000	0.4659	5.00	66075.0000	0.4158	20.0	264636.000	0.3943
1,1,1,2-Tetrachloroethane	2.00	13020.0000	0.3947	5.00	37528.0000	0.4093	20.0	158277.000	0.3283
1,1,1-Trichloroethane	2.00	20813.0000	0.3445	5.00	54388.0000	0.3423	20.0	226334.000	0.3372
1,1,2-Trichloroethane	2.00	8629.00000	0.2616	5.00	25114.0000	0.2739	20.0	104733.000	0.2173
1,1-Dichloropropene	2.00	17581.0000	0.2910	5.00	50118.0000	0.3154	20.0	206930.000	0.3083
1,2,3-Trichlorobenzene	2.00	8972.00000	0.7317	5.00	29413.0000	0.9247	20.0	150336.000	0.9778
1,2,3-Trichloropropane	2.00	2296.00000	0.1872	5.00	8209.00000	0.2581	20.0	34955.0000	0.2274
1,2,4-Trichlorobenzene	2.00	7582.00000	0.6183	5.00	24334.0000	0.7650	20.0	139374.000	0.9065
1,2,4-Trimethylbenzene	2.00	30951.0000	2.524	5.00	83508.0000	2.625	20.0	407638.000	2.651
1,2-Dibromo-3-Chloropropane	2.00	1387.00000	0.1131	5.00	4194.00000	0.1319	20.0	21152.0000	0.1376
1,2-Dibromoethane	2.00	7978.00000	0.2419	5.00	23909.0000	0.2607	20.0	105090.000	0.2180
1,2-Dichlorobenzene	2.00	14783.0000	1.206	5.00	39283.0000	1.235	20.0	196122.000	1.276
1,2-Dichloroethane	2.00	18595.0000	0.3077	5.00	50508.0000	0.3178	20.0	209078.000	0.3115
1,3,5-Trimethylbenzene	2.00	38274.0000	3.121	5.00	110038.000	3.459	20.0	523415.000	3.405
1,3-Dichlorobenzene	2.00	13095.0000	1.068	5.00	37192.0000	1.169	20.0	189568.000	1.233
1,3-Dichloropropane	2.00	14347.0000	0.4350	5.00	41484.0000	0.4524	20.0	182014.000	0.3776
1,4-Dichlorobenzene	2.00	12921.0000	1.054	5.00	37757.0000	1.187	20.0	183358.000	1.193
2,2-Dichloropropane	2.00	20892.0000	0.3458	5.00	54768.0000	0.3447	20.0	223111.000	0.3324
2-Butanone	NA	NA	NA	5.00	14139.0000	0.08900	20.0	55998.0000	0.08340
2-Chloroethyl Vinyl Ether	2.00	3445.00000	0.05700	5.00	11195.0000	0.07040	20.0	70968.0000	0.1057
2-Chlorotoluene	2.00	23650.0000	1.929	5.00	62080.0000	1.952	20.0	350791.000	2.282
2-Hexanone	NA	NA	NA	5.00	10691.0000	0.1166	20.0	62637.0000	0.1299
4-Chlorotoluene	2.00	16803.0000	1.370	5.00	48621.0000	1.529	20.0	238323.000	1.550
4-Methyl-2-Pentanone	NA	NA	NA	5.00	9058.00000	0.05700	20.0	43461.0000	0.06480
Acetone	NA	NA	NA	5.00	10133.0000	0.06380	20.0	35127.0000	0.05230
Benzene	2.00	51554.0000	0.8532	5.00	139846.000	0.8800	20.0	586477.000	0.8738
Bromobenzene	2.00	8732.00000	0.7121	5.00	24080.0000	0.7570	20.0	130066.000	0.8460
Bromochloromethane	2.00	6796.00000	0.1125	5.00	18750.0000	0.1180	20.0	74231.0000	0.1106
Bromodichloromethane	2.00	15558.0000	0.2575	5.00	45047.0000	0.2835	20.0	183553.000	0.2735
Bromomethane	2.00	12059.0000	0.1996	5.00	30234.0000	0.1903	20.0	105356.000	0.1570
Carbon Disulfide	2.00	43608.0000	0.7217	5.00	116649.000	0.7341	20.0	485162.000	0.7229
Carbon Tetrachloride	2.00	16790.0000	0.2779	5.00	46444.0000	0.2923	20.0	190198.000	0.2834

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Login Number: L09030427
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	329580.000	0.1865	100	762552.000	0.1982	200	1363656.00	0.1776
1,2-Dichloropropane	50.0	459398.000	0.2600	100	1033249.00	0.2686	200	1926295.00	0.2509
Chloroform	50.0	657133.000	0.3718	100	1495126.00	0.3887	200	2658987.00	0.3463
Ethylbenzene	50.0	553747.000	0.4040	100	1250773.00	0.4287	200	2576983.00	0.4108
Toluene	50.0	1498157.00	1.093	100	3342944.00	1.146	200	6028123.00	0.9609
Vinyl Chloride	50.0	427744.000	0.2420	100	942149.000	0.2449	200	1396742.00	0.1819
1,1,2,2-Tetrachloroethane	50.0	306843.000	0.6188	100	612994.000	0.4964	NA	NA	NA
1,1-Dichloroethane	50.0	803255.000	0.4545	100	1819010.00	0.4729	200	3177501.00	0.4138
Bromoform	50.0	235033.000	0.1715	100	491069.000	0.1683	200	918842.000	0.1465
Chlorobenzene	50.0	1018617.00	0.7431	100	2241462.00	0.7682	200	4390321.00	0.6998
Chloromethane	50.0	706350.000	0.3997	100	1569584.00	0.4080	200	3078222.00	0.4009
1,1,1,2-Tetrachloroethane	50.0	408434.000	0.2980	100	882662.000	0.3025	NA	NA	NA
1,1,1-Trichloroethane	50.0	579114.000	0.3277	100	1335703.00	0.3472	200	2355450.00	0.3068
1,1,2-Trichloroethane	50.0	271102.000	0.1978	100	559618.000	0.1918	NA	NA	NA
1,1-Dichloropropene	50.0	519605.000	0.2940	100	1203619.00	0.3129	200	2151741.00	0.2802
1,2,3-Trichlorobenzene	50.0	439450.000	0.8862	100	993490.000	0.8045	200	2018460.00	0.6776
1,2,3-Trichloropropane	50.0	93774.0000	0.1891	100	190746.000	0.1545	NA	NA	NA
1,2,4-Trichlorobenzene	50.0	427613.000	0.8624	100	987228.000	0.7994	200	2091393.00	0.7021
1,2,4-Trimethylbenzene	50.0	1241658.00	2.504	100	2775026.00	2.247	200	5012151.00	1.683
1,2-Dibromo-3-Chloropropane	50.0	61928.0000	0.1249	100	130743.000	0.1059	200	256844.000	0.08620
1,2-Dibromoethane	50.0	268362.000	0.1958	100	523939.000	0.1796	NA	NA	NA
1,2-Dichlorobenzene	50.0	643024.000	1.297	100	1555334.00	1.260	NA	NA	NA
1,2-Dichloroethane	50.0	528028.000	0.2988	100	1169626.00	0.3041	200	2067950.00	0.2693
1,3,5-Trimethylbenzene	50.0	1409824.00	2.843	100	3031588.00	2.455	NA	NA	NA
1,3-Dichlorobenzene	50.0	642449.000	1.296	100	1616456.00	1.309	200	3429508.00	1.151
1,3-Dichloropropane	50.0	467355.000	0.3409	100	947207.000	0.3246	NA	NA	NA
1,4-Dichlorobenzene	50.0	577078.000	1.164	100	1479404.00	1.198	200	3242118.00	1.088
2,2-Dichloropropane	50.0	568501.000	0.3217	100	1302298.00	0.3386	200	2302408.00	0.2999
2-Butanone	50.0	143467.000	0.08120	100	304541.000	0.07920	200	581268.000	0.07570
2-Chloroethyl Vinyl Ether	50.0	198911.000	0.1126	100	440872.000	0.1146	200	897798.000	0.1169
2-Chlorotoluene	50.0	1162356.00	2.344	100	2586259.00	2.094	200	4871025.00	1.635
2-Hexanone	50.0	199383.000	0.1455	100	408127.000	0.1399	200	823313.000	0.1312
4-Chlorotoluene	50.0	857122.000	1.729	100	2180549.00	1.766	200	4564424.00	1.532
4-Methyl-2-Pentanone	50.0	115312.000	0.06520	100	238672.000	0.06200	200	474624.000	0.06180
Acetone	50.0	92985.0000	0.05260	100	205962.000	0.05350	200	364614.000	0.04750
Benzene	50.0	1505910.00	0.8521	100	3337022.00	0.8675	200	5872630.00	0.7648
Bromobenzene	50.0	427493.000	0.8621	100	937993.000	0.7596	200	1926786.00	0.6468
Bromochloromethane	50.0	189265.000	0.1071	100	430334.000	0.1119	200	749143.000	0.09760
Bromodichloromethane	50.0	469646.000	0.2658	100	1055327.00	0.2744	200	1978771.00	0.2577
Bromomethane	50.0	261442.000	0.1479	100	649442.000	0.1688	200	1240282.00	0.1615
Carbon Disulfide	50.0	1240883.00	0.7022	100	2696693.00	0.7011	200	4527199.00	0.5896
Carbon Tetrachloride	50.0	485424.000	0.2747	100	1123796.00	0.2922	200	1988639.00	0.2590

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Column ID: F

Analyte	WG297559-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1,2-Tetrachloroethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,1-Dichloropropene	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA
1,2,4-Trimethylbenzene	NA	NA	NA
1,2-Dibromo-3-Chloropropane	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
1,3,5-Trimethylbenzene	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA
1,3-Dichloropropane	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA
2,2-Dichloropropane	NA	NA	NA
2-Butanone	300	891790.000	0.08070
2-Chloroethyl Vinyl Ether	NA	NA	NA
2-Chlorotoluene	NA	NA	NA
2-Hexanone	300	850457.000	0.1298
4-Chlorotoluene	NA	NA	NA
4-Methyl-2-Pentanone	300	676286.000	0.06120
Acetone	300	525628.000	0.04760
Benzene	NA	NA	NA
Bromobenzene	NA	NA	NA
Bromochloromethane	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA

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Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	NA	NA	NA	NA	NA	NA	1.00	3089.00000	0.1046
Dibromochloromethane	NA	NA	NA	0.400	2254.00000	0.3447	1.00	4925.00000	0.3062
Dibromomethane	NA	NA	NA	0.400	1212.00000	0.1043	1.00	3489.00000	0.1181
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	1.00	5897.00000	0.1996
Hexachlorobutadiene	NA	NA	NA	0.400	958.000000	0.4059	1.00	2562.00000	0.4303
Isopropylbenzene	NA	NA	NA	0.400	8778.00000	1.343	1.00	20436.0000	1.271
Methylene Chloride	NA	NA	NA	0.400	8581.00000	0.7387	1.00	13415.0000	0.4542
Naphthalene	NA	NA	NA	0.400	3205.00000	1.358	1.00	6377.00000	1.071
Styrene	NA	NA	NA	NA	NA	NA	1.00	7775.00000	0.4835
Tetrachloroethene	NA	NA	NA	0.400	1770.00000	0.2707	1.00	4245.00000	0.2640
Trichloroethene	NA	NA	NA	0.400	2639.00000	0.2272	1.00	6613.00000	0.2239
Trichlorofluoromethane	NA	NA	NA	0.400	4216.00000	0.3629	1.00	9058.00000	0.3067
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2851.00000	0.2454	1.00	7192.00000	0.2435
cis-1,3-Dichloropropene	NA	NA	NA	0.400	3509.00000	0.3021	1.00	8302.00000	0.2811
m-,p-Xylene	NA	NA	NA	0.800	5632.00000	0.4307	2.00	11900.0000	0.3700
n-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	9829.00000	1.651
n-Propylbenzene	NA	NA	NA	0.400	6215.00000	2.634	1.00	13508.0000	2.269
o-Xylene	NA	NA	NA	NA	NA	NA	1.00	6816.00000	0.4238
p-Isopropyltoluene	NA	NA	NA	NA	NA	NA	1.00	15139.0000	2.543
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	17410.0000	2.924
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	4285.00000	0.7197
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2506.00000	0.2157	1.00	6693.00000	0.2266
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7174.00000	0.4461

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Analytical Method: 8260BInstrument ID: HPMS10
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Column ID: F

Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	2.00	7583.00000	0.1255	5.00	20796.0000	0.1309	20.0	83526.0000	0.1244
Dibromochloromethane	2.00	11508.0000	0.3489	5.00	30891.0000	0.3369	20.0	137608.000	0.2855
Dibromomethane	2.00	6927.00000	0.1146	5.00	18763.0000	0.1181	20.0	78492.0000	0.1169
Dichlorodifluoromethane	2.00	14976.0000	0.2479	5.00	38579.0000	0.2428	20.0	159365.000	0.2374
Hexachlorobutadiene	2.00	5571.00000	0.4543	5.00	16981.0000	0.5339	20.0	84203.0000	0.5477
Isopropylbenzene	2.00	39930.0000	1.211	5.00	115346.000	1.258	20.0	562076.000	1.166
Methylene Chloride	2.00	18642.0000	0.3085	5.00	42380.0000	0.2667	20.0	146396.000	0.2181
Naphthalene	2.00	12224.0000	0.9969	5.00	37197.0000	1.169	20.0	217737.000	1.416
Styrene	2.00	15261.0000	0.4627	5.00	43957.0000	0.4794	20.0	259223.000	0.5377
Tetrachloroethene	2.00	9504.00000	0.2881	5.00	25728.0000	0.2806	20.0	130480.000	0.2707
Trichloroethene	2.00	13526.0000	0.2239	5.00	37297.0000	0.2347	20.0	161970.000	0.2413
Trichlorofluoromethane	2.00	23131.0000	0.3828	5.00	59300.0000	0.3732	20.0	242919.000	0.3619
Vinyl Acetate	2.00	35900.0000	0.5941	5.00	95835.0000	0.6031	20.0	294336.000	0.4385
cis-1,2-Dichloroethene	2.00	13973.0000	0.2313	5.00	36900.0000	0.2322	20.0	158622.000	0.2363
cis-1,3-Dichloropropene	2.00	17270.0000	0.2858	5.00	49310.0000	0.3103	20.0	209487.000	0.3121
m-,p-Xylene	4.00	24837.0000	0.3765	10.0	65350.0000	0.3564	40.0	376375.000	0.3904
n-Butylbenzene	2.00	22062.0000	1.799	5.00	54389.0000	1.710	20.0	238553.000	1.552
n-Propylbenzene	2.00	25259.0000	2.060	5.00	65575.0000	2.062	20.0	349035.000	2.270
o-Xylene	2.00	14065.0000	0.4264	5.00	37506.0000	0.4090	20.0	210116.000	0.4359
p-Isopropyltoluene	2.00	32886.0000	2.682	5.00	87167.0000	2.740	20.0	400050.000	2.602
sec-Butylbenzene	2.00	37920.0000	3.092	5.00	104048.000	3.271	20.0	504218.000	3.280
tert-Butylbenzene	2.00	7952.00000	0.6485	5.00	24347.0000	0.7654	20.0	99562.0000	0.6476
trans-1,2-Dichloroethene	2.00	12925.0000	0.2139	5.00	33512.0000	0.2109	20.0	145299.000	0.2165
trans-1,3-Dichloropropene	2.00	15479.0000	0.4693	5.00	40467.0000	0.4413	20.0	185868.000	0.3856

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Login Number: L09030427
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	50.0	206513.000	0.1169	100	514022.000	0.1336	200	925113.000	0.1205
Dibromochloromethane	50.0	353308.000	0.2577	100	713925.000	0.2447	NA	NA	NA
Dibromomethane	50.0	199907.000	0.1131	100	445320.000	0.1158	200	817443.000	0.1065
Dichlorodifluoromethane	50.0	399973.000	0.2263	100	923781.000	0.2402	200	1633246.00	0.2127
Hexachlorobutadiene	50.0	240534.000	0.4851	100	556239.000	0.4504	200	1132043.00	0.3800
Isopropylbenzene	50.0	1754773.00	1.280	100	3656932.00	1.253	200	6767653.00	1.079
Methylene Chloride	50.0	353244.000	0.1999	100	795663.000	0.2068	NA	NA	NA
Naphthalene	50.0	675620.000	1.363	100	1378729.00	1.117	NA	NA	NA
Styrene	50.0	945498.000	0.6898	100	2279199.00	0.7812	NA	NA	NA
Tetrachloroethene	50.0	334935.000	0.2443	100	785824.000	0.2693	200	1475682.00	0.2352
Trichloroethene	50.0	411484.000	0.2328	100	958795.000	0.2493	200	1764921.00	0.2299
Trichlorofluoromethane	50.0	622383.000	0.3522	100	1365200.00	0.3549	200	2412845.00	0.3142
Vinyl Acetate	50.0	540081.000	0.3056	100	1104768.00	0.2872	200	1806316.00	0.2353
cis-1,2-Dichloroethene	50.0	411821.000	0.2330	100	936428.000	0.2434	200	1670024.00	0.2175
cis-1,3-Dichloropropene	50.0	531287.000	0.3006	100	1149697.00	0.2989	200	2263320.00	0.2948
m-,p-Xylene	100	1283637.00	0.4682	200	2928843.00	0.5019	400	5671213.00	0.4520
n-Butylbenzene	50.0	748338.000	1.509	100	2012828.00	1.630	200	3562919.00	1.196
n-Propylbenzene	50.0	1424532.00	2.873	100	3666084.00	2.969	200	7190902.00	2.414
o-Xylene	50.0	672761.000	0.4908	100	1472355.00	0.5046	200	2982505.00	0.4754
p-Isopropyltoluene	50.0	1146412.00	2.312	100	2642799.00	2.140	200	5059144.00	1.698
sec-Butylbenzene	50.0	1359469.00	2.742	100	3303794.00	2.675	200	6769146.00	2.273
tert-Butylbenzene	50.0	278343.000	0.5613	100	657666.000	0.5326	NA	NA	NA
trans-1,2-Dichloroethene	50.0	381454.000	0.2158	100	855793.000	0.2225	200	1542763.00	0.2009
trans-1,3-Dichloropropene	50.0	465577.000	0.3396	100	948993.000	0.3253	NA	NA	NA

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Analytical Method: 8260B

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-11		
	CONC	RESP	RF
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Dibromomethane	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA
Isopropylbenzene	NA	NA	NA
Methylene Chloride	NA	NA	NA
Naphthalene	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA
Vinyl Acetate	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-, p-Xylene	NA	NA	NA
n-Butylbenzene	NA	NA	NA
n-Propylbenzene	NA	NA	NA
o-Xylene	NA	NA	NA
p-Isopropyltoluene	NA	NA	NA
sec-Butylbenzene	NA	NA	NA
tert-Butylbenzene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

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Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
ICal Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	20.0	ug/L	0.395	0.100	30	
1,1-Dichloroethene	CCC	20.0	21.5	ug/L	0.202	7.30	30	
1,2-Dichloropropane	CCC	20.0	20.1	ug/L	0.271	0.300	30	
Ethylbenzene	CCC	20.0	21.9	ug/L	0.394	9.30	30	
Toluene	CCC	20.0	20.8	ug/L	1.18	4.20	30	
Vinyl Chloride	CCC	20.0	19.1	ug/L	0.263	4.60	30	
Bromoform	SPCC	20.0	20.5	ug/L	0.184	2.50	30	
Chlorobenzene	SPCC	20.0	21.2	ug/L	0.782	6.10	30	
Chloromethane	SPCC	20.0	20.3	ug/L	0.419	1.60	30	
1,1-Dichloroethane	SPCC	20.0	20.0	ug/L	0.473	0.100	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	20.5	ug/L	0.740	2.50	30	
Acetone		20.0	19.5	ug/L	0.0517	2.30	30	
Benzene		20.0	20.4	ug/L	0.900	1.80	30	
Bromobenzene		20.0	23.1	ug/L	0.887	15.4	30	
Bromochloromethane		20.0	20.6	ug/L	0.113	2.80	30	
Bromodichloromethane		20.0	21.5	ug/L	0.290	7.60	30	
Bromomethane		20.0	19.7	ug/L	0.169	1.50	30	
2-Butanone		20.0	19.7	ug/L	0.0805	1.30	30	
n-Butylbenzene		20.0	20.7	ug/L	1.63	3.30	30	
sec-Butylbenzene		20.0	23.5	ug/L	3.39	17.3	30	
tert-Butylbenzene		20.0	20.5	ug/L	0.661	2.40	30	
Carbon Disulfide		20.0	19.6	ug/L	0.685	2.10	30	
Carbon Tetrachloride		20.0	21.0	ug/L	0.290	5.20	30	
Dibromochloromethane		20.0	19.3	ug/L	0.293	3.50	30	
Chloroethane		20.0	22.3	ug/L	0.137	11.7	30	
2-Chloroethyl Vinyl Ether		20.0	19.6	ug/L	0.104	2.20	30	
2-Chlorotoluene		20.0	22.0	ug/L	2.31	9.90	30	
4-Chlorotoluene		20.0	22.0	ug/L	1.71	10.0	30	
1,2-Dibromo-3-Chloropropane		20.0	21.0	ug/L	0.135	4.80	30	
1,2-Dibromoethane		20.0	19.7	ug/L	0.222	1.70	30	
Dibromomethane		20.0	20.8	ug/L	0.118	4.20	30	
1,2-Dichlorobenzene		20.0	20.6	ug/L	1.31	3.20	30	
1,3-Dichlorobenzene		20.0	21.6	ug/L	1.27	8.00	30	
1,4-Dichlorobenzene		20.0	19.9	ug/L	1.21	0.500	30	
Dichlorodifluoromethane		20.0	24.1	ug/L	0.276	20.4	30	
1,2-Dichloroethane		20.0	19.8	ug/L	0.301	1.10	30	
cis-1,2-Dichloroethene		20.0	21.3	ug/L	0.250	6.30	30	
trans-1,2-Dichloroethene		20.0	21.2	ug/L	0.229	6.10	30	
1,3-Dichloropropane		20.0	19.2	ug/L	0.390	3.90	30	
2,2-Dichloropropane		20.0	20.2	ug/L	0.341	0.900	30	
cis-1,3-Dichloropropene		20.0	21.0	ug/L	0.314	5.10	30	
trans-1,3-Dichloropropene		20.0	17.3	ug/L	0.347	13.6	30	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 1351341
Report generated 03/26/2009 14:56



Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
Ical Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
1,1-Dichloropropene	20.0	20.5	ug/L	0.303	2.60	30	
2-Hexanone	20.0	19.4	ug/L	0.128	3.10	30	
Hexachlorobutadiene	20.0	24.5	ug/L	0.566	22.7	30	
Isopropylbenzene	20.0	18.2	ug/L	1.12	9.00	30	
p-Isopropyltoluene	20.0	21.6	ug/L	2.70	8.20	30	
4-Methyl-2-Pentanone	20.0	20.6	ug/L	0.0640	3.10	30	
Methylene Chloride	20.0	21.5	ug/L	0.229	7.60	30	
Naphthalene	20.0	23.3	ug/L	1.41	16.5	30	
n-Propylbenzene	20.0	19.9	ug/L	2.43	0.700	30	
Styrene	20.0	19.7	ug/L	0.587	1.70	30	
1,1,1,2-Tetrachloroethane	20.0	18.4	ug/L	0.333	8.00	30	
Tetrachloroethene	20.0	20.4	ug/L	0.271	2.10	30	
1,2,3-Trichlorobenzene	20.0	21.4	ug/L	0.981	6.80	30	
1,2,4-Trichlorobenzene	20.0	24.7	ug/L	0.931	23.3	30	
1,1,1-Trichloroethane	20.0	20.4	ug/L	0.341	1.80	30	
1,1,2-Trichloroethane	20.0	19.6	ug/L	0.226	2.20	30	
Trichloroethene	20.0	21.1	ug/L	0.245	5.30	30	
Trichlorofluoromethane	20.0	20.9	ug/L	0.367	4.60	30	
1,2,3-Trichloropropane	20.0	21.3	ug/L	0.229	6.30	30	
1,2,4-Trimethylbenzene	20.0	23.5	ug/L	2.81	17.3	30	
1,3,5-Trimethylbenzene	20.0	22.5	ug/L	3.48	12.6	30	
Vinyl Acetate	20.0	14.1	ug/L	0.286	29.4	40	
o-Xylene	20.0	20.9	ug/L	0.473	4.60	30	
m-,p-Xylene	40.0	41.0	ug/L	0.428	2.40	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297818-02
Instrument ID: HPMS10 Run Time: 08:35 Method: 8260B
File ID: 10M71226 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG297819 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	49.5	ug/L	0.392	1.05	20	
1,1-Dichloroethene	CCC	50.0	52.5	ug/L	0.198	4.99	20	
1,2-Dichloropropane	CCC	50.0	50.0	ug/L	0.270	0.0936	20	
Ethylbenzene	CCC	50.0	55.9	ug/L	0.403	11.7	20	
Toluene	CCC	50.0	50.6	ug/L	1.15	1.20	20	
Vinyl Chloride	CCC	50.0	43.4	ug/L	0.231	13.3	20	
Bromoform	SPCC	50.0	49.0	ug/L	0.176	2.06	40	
Chlorobenzene	SPCC	50.0	51.6	ug/L	0.761	3.17	40	
Chloromethane	SPCC	50.0	36.3	ug/L	0.300	27.4	40	
1,1-Dichloroethane	SPCC	50.0	50.5	ug/L	0.477	1.06	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	42.6	ug/L	0.558	14.8	40	
Acetone		50.0	45.9	ug/L	0.0485	8.21	40	
Benzene		50.0	49.8	ug/L	0.880	0.474	40	
Bromobenzene		50.0	51.1	ug/L	0.786	2.20	40	
Bromochloromethane		50.0	49.7	ug/L	0.110	0.674	40	
Bromodichloromethane		50.0	50.8	ug/L	0.274	1.56	40	
Bromomethane		50.0	46.3	ug/L	0.159	7.45	40	
2-Butanone		50.0	46.7	ug/L	0.0761	6.62	40	
n-Butylbenzene		50.0	54.7	ug/L	1.73	9.35	40	
sec-Butylbenzene		50.0	45.6	ug/L	2.64	8.86	40	
tert-Butylbenzene		50.0	41.5	ug/L	0.536	17.0	40	
Carbon Disulfide		50.0	50.3	ug/L	0.703	0.512	40	
Carbon Tetrachloride		50.0	50.2	ug/L	0.277	0.302	40	
Dibromochloromethane		50.0	43.5	ug/L	0.264	13.1	40	
Chloroethane		50.0	47.2	ug/L	0.115	5.69	40	
2-Chloroethyl Vinyl Ether		50.0	48.7	ug/L	0.109	2.65	40	
2-Chlorotoluene		50.0	52.6	ug/L	2.21	5.11	40	
4-Chlorotoluene		50.0	55.5	ug/L	1.72	11.0	40	
1,2-Dibromo-3-Chloropropane		50.0	44.3	ug/L	0.108	11.4	40	
1,2-Dibromoethane		50.0	41.0	ug/L	0.185	18.0	40	
Dibromomethane		50.0	50.4	ug/L	0.114	0.716	40	
1,2-Dichlorobenzene		50.0	50.9	ug/L	1.29	1.76	40	
1,3-Dichlorobenzene		50.0	54.8	ug/L	1.29	9.57	40	
1,4-Dichlorobenzene		50.0	48.6	ug/L	1.18	2.82	40	
Dichlorodifluoromethane		50.0	48.0	ug/L	0.220	4.05	40	
1,2-Dichloroethane		50.0	49.1	ug/L	0.299	1.83	40	
cis-1,2-Dichloroethene		50.0	51.9	ug/L	0.244	3.79	40	
trans-1,2-Dichloroethene		50.0	52.8	ug/L	0.227	5.60	40	
1,3-Dichloropropane		50.0	41.9	ug/L	0.340	16.2	40	
2,2-Dichloropropane		50.0	50.0	ug/L	0.338	0.0604	40	
cis-1,3-Dichloropropene		50.0	47.9	ug/L	0.286	4.26	40	
trans-1,3-Dichloropropene		50.0	41.1	ug/L	0.329	17.9	40	

CCV - Modified 03/05/2008
PDF File ID: 1351343
Report generated 03/26/2009 14:56



Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297818-02
Instrument ID: HPMS10 Run Time: 08:35 Method: 8260B
File ID: 10M71226 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG297819 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	52.2	ug/L	0.309	4.33	40	
2-Hexanone	50.0	51.2	ug/L	0.135	2.44	40	
Hexachlorobutadiene	50.0	53.5	ug/L	0.493	7.00	40	
Isopropylbenzene	50.0	49.5	ug/L	1.22	1.03	40	
p-Isopropyltoluene	50.0	50.4	ug/L	2.37	0.779	40	
4-Methyl-2-Pentanone	50.0	50.2	ug/L	0.0622	0.322	40	
Methylene Chloride	50.0	51.2	ug/L	0.212	2.49	40	
Naphthalene	50.0	53.4	ug/L	1.29	6.71	40	
n-Propylbenzene	50.0	57.5	ug/L	2.81	14.9	40	
Styrene	50.0	51.6	ug/L	0.701	3.25	40	
1,1,1,2-Tetrachloroethane	50.0	43.5	ug/L	0.315	13.1	40	
Tetrachloroethene	50.0	49.7	ug/L	0.264	0.580	40	
1,2,3-Trichlorobenzene	50.0	50.4	ug/L	0.885	0.774	40	
1,2,4-Trichlorobenzene	50.0	57.9	ug/L	0.874	15.7	40	
1,1,1-Trichloroethane	50.0	51.3	ug/L	0.344	2.51	40	
1,1,2-Trichloroethane	50.0	44.2	ug/L	0.204	11.7	40	
Trichloroethene	50.0	53.9	ug/L	0.251	7.84	40	
Trichlorofluoromethane	50.0	49.7	ug/L	0.349	0.532	40	
1,2,3-Trichloropropane	50.0	43.5	ug/L	0.172	13.1	40	
1,2,4-Trimethylbenzene	50.0	53.7	ug/L	2.57	7.38	40	
1,3,5-Trimethylbenzene	50.0	45.5	ug/L	2.81	8.91	40	
Vinyl Acetate	50.0	42.7	ug/L	0.281	14.5	40	
o-Xylene	50.0	53.4	ug/L	0.483	6.72	40	
m-,p-Xylene	100	112	ug/L	0.467	11.7	40	
1,2-Dichloroethene	100	105	ug/L	0.236	4.70	40	
Xylenes	150	165	ug/L	0.475	10.0	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG297940-02
Instrument ID: HPMS10 Run Time: 08:51 Method: 8260B
File ID: 10M71261 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG297941 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	47.5	ug/L	0.376	4.95	20	
1,1-Dichloroethene	CCC	50.0	50.0	ug/L	0.188	0.0768	20	
1,2-Dichloropropane	CCC	50.0	49.4	ug/L	0.267	1.21	20	
Ethylbenzene	CCC	50.0	52.1	ug/L	0.375	4.15	20	
Toluene	CCC	50.0	48.3	ug/L	1.09	3.50	20	
Vinyl Chloride	CCC	50.0	43.7	ug/L	0.232	12.5	20	
Bromoform	SPCC	50.0	47.3	ug/L	0.170	5.38	40	
Chlorobenzene	SPCC	50.0	49.8	ug/L	0.734	0.463	40	
Chloromethane	SPCC	50.0	38.0	ug/L	0.314	24.0	40	
1,1-Dichloroethane	SPCC	50.0	48.8	ug/L	0.460	2.50	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	40.5	ug/L	0.535	19.1	40	
Acetone		50.0	44.9	ug/L	0.0474	10.3	40	
Benzene		50.0	49.5	ug/L	0.875	0.948	40	
Bromobenzene		50.0	48.3	ug/L	0.743	3.38	40	
Bromochloromethane		50.0	48.5	ug/L	0.107	3.06	40	
Bromodichloromethane		50.0	50.7	ug/L	0.273	1.31	40	
Bromomethane		50.0	48.3	ug/L	0.166	3.43	40	
2-Butanone		50.0	46.7	ug/L	0.0761	6.67	40	
n-Butylbenzene		50.0	53.9	ug/L	1.70	7.89	40	
sec-Butylbenzene		50.0	42.6	ug/L	2.47	14.8	40	
tert-Butylbenzene		50.0	38.1	ug/L	0.492	23.9	40	
Carbon Disulfide		50.0	52.1	ug/L	0.729	4.18	40	
Carbon Tetrachloride		50.0	49.9	ug/L	0.276	0.156	40	
Dibromochloromethane		50.0	41.7	ug/L	0.253	16.6	40	
Chloroethane		50.0	43.9	ug/L	0.107	12.3	40	
2-Chloroethyl Vinyl Ether		50.0	47.9	ug/L	0.107	4.29	40	
2-Chlorotoluene		50.0	52.7	ug/L	2.21	5.34	40	
4-Chlorotoluene		50.0	48.8	ug/L	1.52	2.42	40	
1,2-Dibromo-3-Chloropropane		50.0	38.8	ug/L	0.0955	22.3	40	
1,2-Dibromoethane		50.0	41.7	ug/L	0.188	16.7	40	
Dibromomethane		50.0	49.4	ug/L	0.112	1.18	40	
1,2-Dichlorobenzene		50.0	48.5	ug/L	1.23	2.91	40	
1,3-Dichlorobenzene		50.0	52.6	ug/L	1.24	5.23	40	
1,4-Dichlorobenzene		50.0	47.0	ug/L	1.14	5.99	40	
Dichlorodifluoromethane		50.0	45.0	ug/L	0.207	10.0	40	
1,2-Dichloroethane		50.0	48.1	ug/L	0.293	3.75	40	
cis-1,2-Dichloroethene		50.0	49.5	ug/L	0.233	0.923	40	
trans-1,2-Dichloroethene		50.0	50.0	ug/L	0.215	0.0388	40	
1,3-Dichloropropane		50.0	40.9	ug/L	0.333	18.1	40	
2,2-Dichloropropane		50.0	48.2	ug/L	0.326	3.57	40	
cis-1,3-Dichloropropene		50.0	51.0	ug/L	0.304	1.94	40	
trans-1,3-Dichloropropene		50.0	41.7	ug/L	0.335	16.5	40	

CCV - Modified 03/05/2008
PDF File ID: 1351343
Report generated 03/26/2009 14:56



Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG297940-02
Instrument ID: HPMS10 Run Time: 08:51 Method: 8260B
File ID: 10M71261 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG297941 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	51.0	ug/L	0.302	1.99	40	
2-Hexanone	50.0	50.0	ug/L	0.132	0.0960	40	
Hexachlorobutadiene	50.0	52.5	ug/L	0.484	4.90	40	
Isopropylbenzene	50.0	46.7	ug/L	1.15	6.63	40	
p-Isopropyltoluene	50.0	49.3	ug/L	2.33	1.33	40	
4-Methyl-2-Pentanone	50.0	51.4	ug/L	0.0637	2.74	40	
Methylene Chloride	50.0	48.2	ug/L	0.200	3.60	40	
Naphthalene	50.0	47.4	ug/L	1.15	5.21	40	
n-Propylbenzene	50.0	53.3	ug/L	2.61	6.63	40	
Styrene	50.0	49.2	ug/L	0.662	1.68	40	
1,1,1,2-Tetrachloroethane	50.0	42.0	ug/L	0.304	16.1	40	
Tetrachloroethene	50.0	46.9	ug/L	0.249	6.15	40	
1,2,3-Trichlorobenzene	50.0	43.9	ug/L	0.778	12.3	40	
1,2,4-Trichlorobenzene	50.0	55.7	ug/L	0.842	11.5	40	
1,1,1-Trichloroethane	50.0	49.7	ug/L	0.333	0.619	40	
1,1,2-Trichloroethane	50.0	41.3	ug/L	0.191	17.4	40	
Trichloroethene	50.0	51.7	ug/L	0.241	3.46	40	
Trichlorofluoromethane	50.0	47.1	ug/L	0.331	5.87	40	
1,2,3-Trichloropropane	50.0	41.6	ug/L	0.165	16.9	40	
1,2,4-Trimethylbenzene	50.0	52.4	ug/L	2.51	4.75	40	
1,3,5-Trimethylbenzene	50.0	44.0	ug/L	2.72	11.9	40	
Vinyl Acetate	50.0	41.3	ug/L	0.273	17.5	40	
o-Xylene	50.0	50.8	ug/L	0.459	1.58	40	
m-,p-Xylene	100	106	ug/L	0.443	5.92	40	
1,2-Dichloroethene	100	99.6	ug/L	0.224	0.442	40	
Xylenes	150	157	ug/L	0.451	4.48	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030427
Instrument ID: HPMS10
Workgroup (AAB#): WG297819

CCV Number: WG297818-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG297818-02	NA	NA	268128	696851	911428
Upper Limit	NA	NA	536256	1393702	1822856
Lower Limit	NA	NA	134064	348426	455714
<u>L09030427-05</u>	<u>10.0</u>	<u>DL01</u>	<u>171743</u>	<u>427092</u>	<u>753426</u>
WG297819-01	1.00	01	178930	460694	774657
WG297819-02	1.00	01	219181	629911	857577
WG297819-03	1.00	01	220776	636449	863347

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030427
Instrument ID: HPMS10
Workgroup (AAB#): WG297941

CCV Number: WG297940-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG297940-02	NA	NA	274957	707246	890121
Upper Limit	NA	NA	549914	1414492	1780242
Lower Limit	NA	NA	137479	353623	445061
<u>L09030427-03</u>	<u>1.00</u>	<u>01</u>	<u>164630</u>	<u>420135</u>	<u>674615</u>
L09030427-05	250	DL02	160782	413687	679904
L09030427-11	1.00	01	168688	431344	694985
WG297941-01	1.00	01	182247	456674	748337
WG297941-02	1.00	01	209256	623864	814215
WG297941-03	1.00	01	214946	612957	813095

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030427
Instrument ID: HPMS10
Workgroup (AAB#): WG297819

CCV Number: WG297818-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG297818-02	NA	NA	17.46	14.45	10.59
Upper Limit	NA	NA	17.96	14.95	11.09
Lower Limit	NA	NA	16.96	13.95	10.09
<u>L09030427-05</u>	<u>10.0</u>	<u>DL01</u>	17.46	14.45	10.6
WG297819-01	1.00	01	17.46	14.45	10.6
WG297819-02	1.00	01	17.46	14.45	10.6
WG297819-03	1.00	01	17.46	14.45	10.6

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030427
Instrument ID: HPMS10
Workgroup (AAB#): WG297941

CCV Number: WG297940-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG297940-02	NA	NA	17.46	14.45	10.59
Upper Limit	NA	NA	17.96	14.95	11.09
Lower Limit	NA	NA	16.96	13.95	10.09
<u>L09030427-03</u>	<u>1.00</u>	<u>01</u>	<u>17.46</u>	<u>14.45</u>	<u>10.59</u>
L09030427-05	250	DL02	17.46	14.45	10.59
L09030427-11	1.00	01	17.46	14.45	10.6
WG297941-01	1.00	01	17.46	14.45	10.6
WG297941-02	1.00	01	17.46	14.45	10.6
WG297941-03	1.00	01	17.46	14.45	10.6

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

2.2 Metals Data

2.2.1 Metals ICP-MS Data

2.2.1.1 Summary Data

LABORATORY REPORT

00087271

L09030427

03/26/09 16:12

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025
Project: Longhorn AAP
Site: LHAAP-16

P.O. Number: 389869/ 390836(GWTP)**Sample Analysis Summary**

Client ID	Lab ID	Method	Dilution	Date Received
16WW33-031609	L09030427-01	6020	5	19-MAR-09
16WW34-031609	L09030427-02	6020	500	19-MAR-09
16WW32-031709	L09030427-03	6020	5	19-MAR-09
16WW13-031709	L09030427-04	6020	50	19-MAR-09
16WW16-031709	L09030427-05	6020	5	19-MAR-09
16WW22-031709	L09030427-06	6020	5	19-MAR-09
16WW12-031809	L09030427-07	6020	5	19-MAR-09
16WW12-031809-FD	L09030427-08	6020	5	19-MAR-09
16WW38-031809	L09030427-09	6020	5	19-MAR-09
16WW14-031809	L09030427-10	6020	50	19-MAR-09



Report Number: **L09030427**Report Date : **March 26, 2009**

00087272

Sample Number: **L09030427-01**
Client ID: **16WW33-031609**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/16/2009 12:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/19/2009 11:51**
Run Date: **03/19/2009 15:48**
File ID: **EL.031909.154829**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.00576	J	0.0100	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L09030427**Report Date : **March 26, 2009**

00087273

Sample Number: **L09030427-02**
Client ID: **16WW34-031609**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/16/2009 14:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **500**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/20/2009 13:01**
Run Date: **03/20/2009 19:57**
File ID: **EL.032009.195737**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	32.4		1.00	0.250

Report Number: **L09030427**Report Date : **March 26, 2009**

00087274

Sample Number: **L09030427-03**
Client ID: **16WW32-031709**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/17/2009 12:05**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/19/2009 11:51**
Run Date: **03/19/2009 16:00**
File ID: **EL.031909.160036**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.0509		0.0100	0.00250

Sample Number: **L09030427-04**
Client ID: **16WW13-031709**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/17/2009 13:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **50**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/20/2009 13:01**
Run Date: **03/20/2009 20:03**
File ID: **EL.032009.200339**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Manganese, Total	7439-96-5	3.76		0.100	0.0250

Sample Number: **L09030427-05**
Client ID: **16WW16-031709**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/17/2009 14:35**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/19/2009 11:51**
Run Date: **03/19/2009 16:12**
File ID: **EL.031909.161241**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.00854	J	0.0100	0.00250

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L09030427**Report Date : **March 26, 2009**

00087277

Sample Number: **L09030427-06**
Client ID: **16WW22-031709**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/17/2009 15:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/19/2009 11:51**
Run Date: **03/19/2009 19:28**
File ID: **EL.031909.192858**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.0695		0.0100	0.00250

Sample Number: **L09030427-07**
Client ID: **16WW12-031809**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/18/2009 10:25**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/19/2009 11:51**
Run Date: **03/19/2009 19:35**
File ID: **EL.031909.193500**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.107		0.0100	0.00250

Sample Number: **L09030427-08**
Client ID: **16WW12-031809-FD**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/18/2009 10:25**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/19/2009 11:51**
Run Date: **03/19/2009 19:41**
File ID: **EL.031909.194101**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.101		0.0100	0.00250

Sample Number: **L09030427-09**
 Client ID: **16WW38-031809**
 Matrix: **Water**
 Workgroup Number: **WG297750**
 Collect Date: **03/18/2009 11:05**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **3015**
 Analytical Method: **6020**
 Analyst: **JYH**
 Dilution: **5**
 Units: **mg/L**

Instrument: **ELAN-ICP**
 Prep Date: **03/19/2009 12:55**
 Cal Date: **03/19/2009 11:51**
 Run Date: **03/19/2009 19:47**
 File ID: **EL.031909.194703**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.671		0.0100	0.00250

Report Number: **L09030427**Report Date : **March 26, 2009**

00087281

Sample Number: **L09030427-10**
Client ID: **16WW14-031809**
Matrix: **Water**
Workgroup Number: **WG297750**
Collect Date: **03/18/2009 11:45**
Sample Tag: **DL02**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **50**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/19/2009 12:55**
Cal Date: **03/19/2009 11:51**
Run Date: **03/19/2009 16:21**
File ID: **EL.031909.162151**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.143		0.100	0.0250

10 of 10



2.2.1.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer ELAN 6100

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Final volume

Vi = Initial volume

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in (ug/L)

Example:

0.1

100

40

1

0.25

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Final volume

Vi = Initial volume

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in (ug/kg)

Example:

0.1

200

0.5

1

40

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:

Cx = Concentration calculated as received (wet basis)

Px = Percent solids of sample (%wt)

$Cdry$ = Concentration calculated as dry weight (ug/kg)

Example:

40

80

50

50 ug/kg = 0.050 mg/kg

Perkin Elmer ELAN ICP/MS**STANDARDS KEY****QC Std 1 - ICV****QC Std 2 - ICB****QC Std 3 - CRI - Soil****QC Std 4 - CRI - Water****QC Std 5 - ICSA****QC Std 6 - ICSAB****QC Std 7 - CCV****QC Std 8 - CCB****Calibration Solutions**

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.0004	0.05	0.1
Sb	10	0	0.0004	0.05	0.1
As	10	0	0.0004	0.05	0.1
Ba	10	0	0.0004	0.05	0.1
Be	10	0	0.0004	0.05	0.1
Ca	1000	0	0.04	5	10
Cd	10	0	0.0004	0.05	0.1
Cr	10	0	0.0004	0.05	0.1
Co	10	0	0.0004	0.05	0.1
Cu	10	0	0.0004	0.05	0.1
Fe	1000	0	0.04	5	10
Pb	10	0	0.0004	0.05	0.1
Mg	1000	0	0.04	5	10
Mn	10	0	0.0004	0.05	0.1
Ni	10	0	0.0004	0.05	0.1
K	1000	0	0.04	5	10
Se	10	0	0.0004	0.05	0.1
Ag	10	0	0.0004	0.05	0.1
Na	1000	0	0.04	5	10
Tl	10	0	0.0004	0.05	0.1
V	10	0	0.0004	0.05	0.1
Zn	10	0	0.0004	0.05	0.1

Workgroup: WG297722
Analyst: VC
Spike Analyst: VC
Run Date: 03/19/2009 12:55
Method: 3015

SOP: ME407 Revision 10
Spike Solution: STD30482
Spike Witness: REK
Digest tubes Lot #: COA13696
HNO3 Lot #: COA13756

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG297722-02	BLANK	1	40 mL	100 mL	207.424 g	207.409 g		
2	WG297722-03	LCS	1	40 mL	100 mL	206.89 g	206.866 g	.25 mL	
3	L09030424-09	SAMP	1	40 mL	100 mL	206.154 g	206.131 g		03/20/09
4	L09030427-01	SAMP	1	40 mL	100 mL	205.588 g	205.555 g		03/26/09
5	L09030427-02	SAMP	1	40 mL	100 mL	205.544 g	205.516 g		03/26/09
6	L09030427-03	SAMP	1	40 mL	100 mL	206.085 g	206.071 g		03/26/09
7	L09030427-04	SAMP	1	40 mL	100 mL	206.579 g	206.566 g		03/26/09
8	L09030427-05	SAMP	1	40 mL	100 mL	206.552 g	206.51 g		03/26/09
9	L09030427-06	SAMP	1	40 mL	100 mL	205.935 g	205.899 g		03/26/09
10	L09030427-07	SAMP	1	40 mL	100 mL	207.286 g	207.263 g		03/26/09
11	L09030427-08	SAMP	1	40 mL	100 mL	206.464 g	206.444 g		03/26/09
12	L09030427-09	SAMP	1	40 mL	100 mL	206.619 g	206.6 g		03/26/09
13	WG297722-01	REF	1	40 mL	100 mL	207.21 g	207.18 g		
14	L09030427-10	SAMP	1	40 mL	100 mL	207.21 g	207.18 g		03/26/09
15	WG297722-04	MS	1	40 mL	100 mL	206.02 g	206 g	.25 mL	
16	WG297722-05	MSD	1	40 mL	100 mL	207.359 g	207.332 g	.25 mL	

Analyst: Veeha Collier

Reviewer: REK

Workgroup: WG297722
Analyst: VC
Spike Analyst: VC
Run Date: 03/19/2009 12:55
Method: 3015

SOP: ME407 Revision 10
Spike Solution: STD30482
Spike Witness: REK
Digest tubes Lot #: COA13696
HNO3 Lot #: COA13756

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG297722-02	BLANK	1	40 mL	100 mL	207.424 g	207.409 g		
2	WG297722-03	LCS	1	40 mL	100 mL	206.89 g	206.866 g	.25 mL	
3	L09030424-09	SAMP	1	40 mL	100 mL	206.154 g	206.131 g		03/20/09
4	L09030427-01	SAMP	1	40 mL	100 mL	205.588 g	205.555 g		03/26/09
5	L09030427-02	SAMP	1	40 mL	100 mL	205.544 g	205.516 g		03/26/09
6	L09030427-03	SAMP	1	40 mL	100 mL	206.085 g	206.071 g		03/26/09
7	L09030427-04	SAMP	1	40 mL	100 mL	206.579 g	206.566 g		03/26/09
8	L09030427-05	SAMP	1	40 mL	100 mL	206.552 g	206.51 g		03/26/09
9	L09030427-06	SAMP	1	40 mL	100 mL	205.935 g	205.899 g		03/26/09
10	L09030427-07	SAMP	1	40 mL	100 mL	207.286 g	207.263 g		03/26/09
11	L09030427-08	SAMP	1	40 mL	100 mL	206.464 g	206.444 g		03/26/09
12	L09030427-09	SAMP	1	40 mL	100 mL	206.619 g	206.6 g		03/26/09
13	WG297722-01	REF	1	40 mL	100 mL	207.21 g	207.18 g		
14	L09030427-10	SAMP	1	40 mL	100 mL	207.21 g	207.18 g		03/26/09
15	WG297722-04	MS	1	40 mL	100 mL	206.02 g	206 g	.25 mL	
16	WG297722-05	MSD	1	40 mL	100 mL	207.359 g	207.332 g	.25 mL	

Analyst: Veeha Collier

Reviewer: REK

00087287

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 031909A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 4
 Maintenance Log ID: 28029

Calibration Std: STD31440 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705

Workgroups: 297602,297706,297750,297774,297606

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.031909.112838	Blank	Blank		1		03/19/09 11:28
2	EL.031909.113418	WG297826-01	Calibration Point		1		03/19/09 11:34
3	EL.031909.113959	WG297826-02	Calibration Point		1		03/19/09 11:39
4	EL.031909.114540	WG297826-03	Calibration Point		1		03/19/09 11:45
5	EL.031909.115121	WG297826-04	Calibration Point		1		03/19/09 11:51
6	EL.031909.115704	WG297826-05	Initial Calibration Verification		1		03/19/09 11:57
7	EL.031909.120335	WG297826-06	Initial Calib Blank		1		03/19/09 12:03
8	EL.031909.121008	WG297826-07	CRQL Check Solid		1		03/19/09 12:10
9	EL.031909.121644	WG297826-08	CRQL Check Water		1		03/19/09 12:16
10	EL.031909.122319	WG297826-09	Interference Check		1		03/19/09 12:23
11	EL.031909.122953	WG297826-10	Interference Check		1		03/19/09 12:29
12	EL.031909.123626	WG297826-11	CCV		1		03/19/09 12:36
13	EL.031909.124258	WG297826-12	CCB		1		03/19/09 12:42
14	EL.031909.124908	L09030221-25	LCS5	.5/200	1		03/19/09 12:49
15	EL.031909.125509	L09030221-26	LCS6	.5/200	1		03/19/09 12:55
16	EL.031909.130110	L09030221-27	LCS7	.5/200	1		03/19/09 13:01
17	EL.031909.130711	L09030221-28	LCS8	.5/200	1		03/19/09 13:07
18	EL.031909.131334	WG297826-13	CCV		1		03/19/09 13:13
19	EL.031909.132005	WG297826-14	CCB		1		03/19/09 13:20
20	EL.031909.132616	WG297652-03	Method/Prep Blank	40/100	1		03/19/09 13:26
21	EL.031909.133218	WG297652-04	Laboratory Control S	40/100	1		03/19/09 13:32
22	EL.031909.133820	L09030397-01	OUTFALL 002/COMP	40/100	2		03/19/09 13:38
23	EL.031909.134423	WG297652-02	Reference Sample		1	L09030402-02	03/19/09 13:44
24	EL.031909.135027	WG297652-06	Matrix Spike	40/100	1	L09030402-02	03/19/09 13:50
25	EL.031909.135630	WG297652-07	Matrix Spike Duplica	40/100	1	L09030402-02	03/19/09 13:56
26	EL.031909.140232	L09030381-01	DUPLICATE	40/100	1		03/19/09 14:02
27	EL.031909.140833	WG297706-01	Post Digestion Spike		1	L09030381-01	03/19/09 14:08
28	EL.031909.141434	WG297706-02	Serial Dilution		5	L09030381-01	03/19/09 14:14
29	EL.031909.142035	WG297620-01	Fluid Blank		1		03/19/09 14:20
30	EL.031909.142657	WG297826-15	CCV		1		03/19/09 14:26
31	EL.031909.143329	WG297826-16	CCB		1		03/19/09 14:33
32	EL.031909.144716	WG297722-02	Method/Prep Blank	40/100	1		03/19/09 14:47
33	EL.031909.145316	WG297722-03	Laboratory Control S	40/100	1		03/19/09 14:53
34	EL.031909.145917	WG297722-01	Reference Sample		5	L09030427-10	03/19/09 14:59
35	EL.031909.150517	WG297722-04	Matrix Spike	40/100	5	L09030427-10	03/19/09 15:05
36	EL.031909.151119	WG297722-05	Matrix Spike Duplica	40/100	5	L09030427-10	03/19/09 15:11
37	EL.031909.151720	L09030424-09	RB-090318	40/100	1	WG297710-01	03/19/09 15:17

Page: 1 Approved: March 20, 2009

Maren Beery



00087288

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 031909A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 4
 Maintenance Log ID: 28029

Calibration Std: STD31440 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705

Workgroups: 297602,297706,297750,297774,297606

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.031909.152322	WG297750-01	Post Digestion Spike		1	L09030424-09	03/19/09 15:23
39	EL.031909.152924	WG297750-02	Serial Dilution		5	L09030424-09	03/19/09 15:29
40	EL.031909.153547	WG297826-17	CCV		1		03/19/09 15:35
41	EL.031909.154218	WG297826-18	CCB		1		03/19/09 15:42
42	EL.031909.154829	L09030427-01	16WW33-031609	40/100	5		03/19/09 15:48
43	EL.031909.155432	L09030427-02	16WW34-031609		5		03/19/09 15:54
44	EL.031909.160036	L09030427-03	16WW32-031709	40/100	5		03/19/09 16:00
45	EL.031909.160639	L09030427-04	16WW13-031709		5		03/19/09 16:06
46	EL.031909.161241	L09030427-05	16WW16-031709	40/100	5		03/19/09 16:12
47	EL.031909.162151	WG297722-01	Reference Sample		50	L09030427-10	03/19/09 16:21
48	EL.031909.162752	WG297722-04	Matrix Spike	40/100	50	L09030427-10	03/19/09 16:27
49	EL.031909.163353	WG297722-05	Matrix Spike Duplica	40/100	50	L09030427-10	03/19/09 16:33
50	EL.031909.164015	WG297826-19	CCV		1		03/19/09 16:40
51	EL.031909.164646	WG297826-20	CCB		1		03/19/09 16:46
52	EL.031909.165622	WG297731-02	Method/Prep Blank	.5/200	1		03/19/09 16:56
53	EL.031909.170222	WG297731-03	Laboratory Control S	.5/200	1		03/19/09 17:02
54	EL.031909.170822	WG297731-01	Reference Sample		1	L09030424-06	03/19/09 17:08
55	EL.031909.171918	WG297731-04	Matrix Spike	.506/200	1	L09030424-06	03/19/09 17:19
56	EL.031909.172520	WG297731-05	Matrix Spike Duplica	.506/200	1	L09030424-06	03/19/09 17:25
57	EL.031909.173205	L09030424-01	1206SB03-090318	.508/200	1		03/19/09 17:32
58	EL.031909.173807	L09030424-02	1206SB04-090318-A	.523/200	1		03/19/09 17:38
59	EL.031909.174410	WG297774-01	Post Digestion Spike		1	L09030424-02	03/19/09 17:44
60	EL.031909.175012	WG297774-02	Serial Dilution		5	L09030424-02	03/19/09 17:50
61	EL.031909.175635	WG297826-21	CCV		1		03/19/09 17:56
62	EL.031909.180306	WG297826-22	CCB		1		03/19/09 18:03
63	EL.031909.180917	L09030424-03	1206SB04-090318-B	.541/200	1		03/19/09 18:09
64	EL.031909.181521	L09030424-04	1206SB05-090318	.5/200	1		03/19/09 18:15
65	EL.031909.182124	L09030424-05	1206SB06-090318	.509/200	1		03/19/09 18:21
66	EL.031909.182726	L09030424-07	1206SB07-090318	.501/200	1		03/19/09 18:27
67	EL.031909.183328	L09030424-02	1206SB04-090318-A		25		03/19/09 18:33
68	EL.031909.183932	WG297774-01	Post Digestion Spike		25	L09030424-02	03/19/09 18:39
69	EL.031909.184537	WG297774-02	Serial Dilution		125	L09030424-02	03/19/09 18:45
70	EL.031909.185141	L09030424-03	1206SB04-090318-B		25		03/19/09 18:51
71	EL.031909.185747	L09030424-04	1206SB05-090318		25		03/19/09 18:57
72	EL.031909.190411	WG297826-23	CCV		1		03/19/09 19:04
73	EL.031909.191043	WG297826-24	CCB		1		03/19/09 19:10
74	EL.031909.191654	L09030424-05	1206SB06-090318		25		03/19/09 19:16

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Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 031909A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 4
 Maintenance Log ID: 28029

Calibration Std: STD31440 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705
 Workgroups: 297602,297706,297750,297774,297606

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	EL.031909.192256	L09030424-07	1206SB07-090318		25		03/19/09 19:22
76	EL.031909.192858	L09030427-06	16WW22-031709	40/100	5		03/19/09 19:28
77	EL.031909.193500	L09030427-07	16WW12-031809	40/100	5		03/19/09 19:35
78	EL.031909.194101	L09030427-08	16WW12-031809-FD	40/100	5		03/19/09 19:41
79	EL.031909.194703	L09030427-09	16WW38-031809	40/100	5		03/19/09 19:47
80	EL.031909.195305	L09030381-03	EQUIP BLANK	40/100	1		03/19/09 19:53
81	EL.031909.195907	L09030381-05	MW-03-05	40/100	1		03/19/09 19:59
82	EL.031909.200510	L09030381-07	MW-01-06	40/100	1		03/19/09 20:05
83	EL.031909.201133	WG297826-25	CCV		1		03/19/09 20:11
84	EL.031909.201804	WG297826-26	CCB		1		03/19/09 20:18
85	EL.031909.202416	L09030381-09	MW-01-07	40/100	1		03/19/09 20:24
86	EL.031909.203019	L09030381-11	MW-03-11	40/100	1	WG297634-04	03/19/09 20:30
87	EL.031909.203623	L09030393-03	AV-NCB-AS-SLUDGE-1-031	40/100	1		03/19/09 20:36
88	EL.031909.204227	L09030393-04	AV-NCB-EB-1-031709	40/100	1		03/19/09 20:42
89	EL.031909.204831	L09030402-01	GN090010	40/100	1	WG297652-01	03/19/09 20:48
90	EL.031909.205434	WG297652-05	Duplicate	40/100	1	L09030402-01	03/19/09 20:54
91	EL.031909.210036	L09030313-03	KA3130	.502/200	1		03/19/09 21:00
92	EL.031909.210639	L09030313-04	KA3131	.51/200	1		03/19/09 21:06
93	EL.031909.211242	L09030313-05	KA3132	.529/200	1		03/19/09 21:12
94	EL.031909.211905	WG297826-27	CCV		1		03/19/09 21:19
95	EL.031909.212536	WG297826-28	CCB		1		03/19/09 21:25
96	EL.031909.213148	L09030313-06	KA3133	.519/200	1		03/19/09 21:31
97	EL.031909.213752	L09030313-07	KA3122	.505/200	1		03/19/09 21:37
98	EL.031909.214356	L09030313-08	KA3123	.5/200	1		03/19/09 21:43
99	EL.031909.215000	L09030313-09	KA3124	.501/200	1		03/19/09 21:50
100	EL.031909.215605	L09030313-10	KA3125	.506/200	1		03/19/09 21:56
101	EL.031909.220208	L09030313-11	KA3126	.5/200	1		03/19/09 22:02
102	EL.031909.220810	L09030313-12	KA3139	.505/200	1		03/19/09 22:08
103	EL.031909.221412	L09030313-13	KA3140	.512/200	1		03/19/09 22:14
104	EL.031909.222014	L09030313-14	KA3141	.517/200	1		03/19/09 22:20
105	EL.031909.222617	L09030313-15	KA3118	.504/200	1		03/19/09 22:26
106	EL.031909.223240	WG297826-29	CCV		1		03/19/09 22:32
107	EL.031909.223911	WG297826-30	CCB		1		03/19/09 22:39
108	EL.031909.224523	L09030313-16	KA3119	.532/200	1		03/19/09 22:45
109	EL.031909.225126	L09030313-17	KA3120	.505/200	1		03/19/09 22:51
110	EL.031909.225730	L09030313-11	KA3126	.5/200	25		03/19/09 22:57
111	EL.031909.230334	L09030313-15	KA3118	.504/200	25		03/19/09 23:03

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 031909A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 4
 Maintenance Log ID: 28029

Calibration Std: STD31440 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705
 Workgroups: 297602,297706,297750,297774,297606

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
112	EL.031909.230939	L09030313-16	KA3119	.532/200	25		03/19/09 23:09
113	EL.031909.231543	L09030313-17	KA3120	.505/200	25		03/19/09 23:15
114	EL.031909.232148	WG297317-01	Reference Sample		25	L09030313-18	03/19/09 23:21
115	EL.031909.232752	WG297317-04	Matrix Spike	.514/200	25	L09030313-18	03/19/09 23:27
116	EL.031909.233354	WG297317-05	Matrix Spike Duplica	.514/200	25	L09030313-18	03/19/09 23:33
117	EL.031909.234017	WG297826-31	CCV		1		03/19/09 23:40
118	EL.031909.234648	WG297826-32	CCB		1		03/19/09 23:46

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00087291

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 032009B.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 4
 Maintenance Log ID: 28029

Calibration Std: STD31440 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705

Workgroups: 297854,297897,297856,297750

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.032009.123857	Blank	Blank		1		03/20/09 12:38
2	EL.032009.124437	WG297905-01	Calibration Point		1		03/20/09 12:44
3	EL.032009.125017	WG297905-02	Calibration Point		1		03/20/09 12:50
4	EL.032009.125558	WG297905-03	Calibration Point		1		03/20/09 12:55
5	EL.032009.130140	WG297905-04	Calibration Point		1		03/20/09 13:01
6	EL.032009.130723	WG297905-05	Initial Calibration Verification		1		03/20/09 13:07
7	EL.032009.131354	WG297905-06	Initial Calib Blank		1		03/20/09 13:13
8	EL.032009.132027	WG297905-07	CRQL Check Solid		1		03/20/09 13:20
9	EL.032009.132703	WG297905-08	CRQL Check Water		1		03/20/09 13:27
10	EL.032009.133338	WG297905-09	Interference Check		1		03/20/09 13:33
11	EL.032009.134011	WG297905-10	Interference Check		1		03/20/09 13:40
12	EL.032009.134645	WG297905-11	CCV		1		03/20/09 13:46
13	EL.032009.135317	WG297905-12	CCB		1		03/20/09 13:53
14	EL.032009.135926	WG297791-02	Method/Prep Blank	40/100	1		03/20/09 13:59
15	EL.032009.140526	WG297791-03	Laboratory Control S	40/100	1		03/20/09 14:05
16	EL.032009.141127	WG297791-01	Reference Sample		1	L09030437-07	03/20/09 14:11
17	EL.032009.141728	WG297791-04	Matrix Spike	40/100	1	L09030437-07	03/20/09 14:17
18	EL.032009.142329	WG297791-05	Matrix Spike Duplica	40/100	1	L09030437-07	03/20/09 14:23
19	EL.032009.142930	L09030437-13	AV-GW-ON-GPW15 (031809	40/100	1		03/20/09 14:29
20	EL.032009.143532	WG297854-01	Post Digestion Spike		1	L09030437-13	03/20/09 14:35
21	EL.032009.144134	WG297854-02	Serial Dilution		5	L09030437-13	03/20/09 14:41
22	EL.032009.144757	WG297905-13	CCV		1		03/20/09 14:47
23	EL.032009.145428	WG297905-14	CCB		1		03/20/09 14:54
24	EL.032009.150039	L09030420-01	MW-01-02	40/100	1		03/20/09 15:00
25	EL.032009.150642	L09030420-03	MW-03-04	40/100	1		03/20/09 15:06
26	EL.032009.151246	L09030420-05	MW-03-12	40/100	1		03/20/09 15:12
27	EL.032009.151855	L09030420-07	MW-07-14	40/100	1		03/20/09 15:18
28	EL.032009.152457	L09030435-01	MW-1	40/100	1		03/20/09 15:24
29	EL.032009.153206	L09030435-02	MW-2A	40/100	1		03/20/09 15:32
30	EL.032009.153807	L09030435-03	MW-4	40/100	1		03/20/09 15:38
31	EL.032009.154409	L09030437-03	AV-GW-ON-MW8 (031709)	40/100	1		03/20/09 15:44
32	EL.032009.155010	L09030437-05	AV-GW-ON-MW7 (031809)	40/100	1		03/20/09 15:50
33	EL.032009.155633	WG297905-15	CCV		1		03/20/09 15:56
34	EL.032009.160304	WG297905-16	CCB		1		03/20/09 16:03
35	EL.032009.161051	WG297861-02	Method/Prep Blank		1		03/20/09 16:10
36	EL.032009.161654	WG297861-03	Laboratory Control S		1		03/20/09 16:16
37	EL.032009.162256	WG297861-01	Reference Sample		5	L09030419-30	03/20/09 16:22

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Shari L. Bahgat



00087292

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 032009B.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: 4
 Maintenance Log ID: 28029

Calibration Std: STD31440 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705

Workgroups: 297854,297897,297856,297750

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.032009.162859	WG297861-04	Matrix Spike		5	L09030419-30	03/20/09 16:28
39	EL.032009.163503	WG297861-05	Matrix Spike Duplica		5	L09030419-30	03/20/09 16:35
40	EL.032009.164107	L09030419-02	CDL-BH-1-1		1		03/20/09 16:41
41	EL.032009.164711	L09030419-04	CDL-BH-1-2		1		03/20/09 16:47
42	EL.032009.165313	WG297897-01	Post Digestion Spike		1	L09030419-02	03/20/09 16:53
43	EL.032009.165914	WG297897-02	Serial Dilution		5	L09030419-02	03/20/09 16:59
44	EL.032009.170536	WG297905-17	CCV		1		03/20/09 17:05
45	EL.032009.171207	WG297905-18	CCB		1		03/20/09 17:12
46	EL.032009.171818	L09030419-06	CDL-BH-1-3		1		03/20/09 17:18
47	EL.032009.172419	L09030419-08	CDL-BH-1-4		1		03/20/09 17:24
48	EL.032009.173021	L09030419-10	CDL-BH-1-5		1		03/20/09 17:30
49	EL.032009.173624	L09030419-12	CDL-BH-1-6		1		03/20/09 17:36
50	EL.032009.174227	L09030419-15	CDL-BH-1-DUP		1		03/20/09 17:42
51	EL.032009.174830	L09030419-17	CDL-BH-2-1		1		03/20/09 17:48
52	EL.032009.175434	L09030419-19	CDL-BH-2-2		1		03/20/09 17:54
53	EL.032009.180038	L09030419-21	CDL-BH-2-3		1		03/20/09 18:00
54	EL.032009.180642	L09030419-23	CDL-BH-2-DUP		1		03/20/09 18:06
55	EL.032009.181247	L09030419-24	DDP-1-C		5		03/20/09 18:12
56	EL.032009.181911	WG297905-19	CCV		1		03/20/09 18:19
57	EL.032009.182542	WG297905-20	CCB		1		03/20/09 18:25
58	EL.032009.183153	WG297793-02	Method/Prep Blank	.5/200	1		03/20/09 18:31
59	EL.032009.183755	WG297793-03	Laboratory Control S	.5/200	1		03/20/09 18:37
60	EL.032009.184357	WG297793-01	Reference Sample		1	L09030438-06	03/20/09 18:43
61	EL.032009.184959	WG297793-04	Matrix Spike	.504/200	1	L09030438-06	03/20/09 18:49
62	EL.032009.185602	WG297793-05	Matrix Spike Duplica	.5/200	1	L09030438-06	03/20/09 18:56
63	EL.032009.190205	L09030438-01	KA3088	.5/200	1		03/20/09 19:02
64	EL.032009.190808	L09030438-02	KA3089	.513/200	1		03/20/09 19:08
65	EL.032009.191412	L09030438-03	KA3090	.507/200	1		03/20/09 19:14
66	EL.032009.192016	WG297856-01	Post Digestion Spike		1	L09030438-03	03/20/09 19:20
67	EL.032009.192621	WG297856-02	Serial Dilution		5	L09030438-03	03/20/09 19:26
68	EL.032009.193244	WG297905-21	CCV		1		03/20/09 19:32
69	EL.032009.193916	WG297905-22	CCB		1		03/20/09 19:39
70	EL.032009.194528	L09030438-04	KA3091	.536/200	1		03/20/09 19:45
71	EL.032009.195134	L09030438-05	KA3092	.511/200	1		03/20/09 19:51
72	EL.032009.195737	L09030427-02	16WW34-031609	40/100	500		03/20/09 19:57
73	EL.032009.200339	L09030427-04	16WW13-031709	40/100	50		03/20/09 20:03
74	EL.032009.201002	WG297905-23	CCV		1		03/20/09 20:10

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00087293

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 032009B.REP
Analyst1: JYH Analyst2: N/A
Method: 6020 SOP: ME700 Rev: 4
Maintenance Log ID: 28029

Calibration Std: STD31440 ICV/CCV Std: STD31654 Post Spike: STD27580
ICSA: STD31706 ICSAB: STD31705
Workgroups: 297854,297897,297856,297750

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	EL.032009.201634	WG297905-24	CCB		1		03/20/09 20:16

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Microbac Laboratories Inc.

Data Checklist

Date: 19-MAR-2009

Analyst: JYH

Analyst: NA

Method: 6020

Instrument: ELAN

Curve Workgroup: 297826

Runlog ID: 27117

Analytical Workgroups: 297602,297706,297750,297774,297606

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	221,381,393,397,402,
Client Forms	X
Level X	
Level 3	427
Level 4	381,393,424,313
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:

Secondary Reviewer:
20-MAR-2009

Data Checklist

Date: 20-MAR-2009

Analyst: JYH

Analyst: NA

Method: 6020

Instrument: ELAN

Curve Workgroup: 297905

Runlog ID: 27152

Analytical Workgroups: 297854,297897,297856,297750

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	420,435,437,419,438,427
Client Forms	X
Level X	
Level 3	427
Level 4	420,437,419,438
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	SLP
Comments	

Primary Reviewer:

Secondary Reviewer:
24-MAR-2009

Analytical Method:6020

AAB#:WG297750

Login Number:L09030427

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW14-031809	03/18/09	03/19/09	03/19/09	180	1.05	03/19/09	180	0.143	
16WW32-031709	03/17/09	03/19/09	03/19/09	180	2.04	03/19/09	180	0.128	
16WW33-031609	03/16/09	03/19/09	03/19/09	180	3.02	03/19/09	180	0.120	
16WW12-031809	03/18/09	03/19/09	03/19/09	180	1.10	03/19/09	180	0.277	
16WW34-031609	03/16/09	03/19/09	03/19/09	180	2.92	03/20/09	180	1.29	
16WW13-031709	03/17/09	03/19/09	03/19/09	180	1.98	03/20/09	180	1.30	
16WW16-031709	03/17/09	03/19/09	03/19/09	180	1.93	03/19/09	180	0.137	
16WW22-031709	03/17/09	03/19/09	03/19/09	180	1.88	03/19/09	180	0.273	
16WW38-031809	03/18/09	03/19/09	03/19/09	180	1.08	03/19/09	180	0.286	
16WW12-031809-FD	03/18/09	03/19/09	03/19/09	180	1.10	03/19/09	180	0.281	

* EXT = SEE PROJECT QAPP REQUIREMENTS

*ANAL = SEE PROJECT QAPP REQUIREMENTS

METHOD BLANK SUMMARY

Login Number: L09030427
 Blank File ID: EL.031909.144716
 Prep Date: 03/19/09 12:55
 Analyzed Date: 03/19/09 14:47
 Analyst: JYH

Work Group: WG297750
 Blank Sample ID: WG297722-02
 Instrument ID: ELAN-ICP
 Method: 6020

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG297722-03	EL.031909.145316	03/19/09 14:53	01
16WW33-031609	L09030427-01	EL.031909.154829	03/19/09 15:48	DL01
16WW32-031709	L09030427-03	EL.031909.160036	03/19/09 16:00	DL01
16WW16-031709	L09030427-05	EL.031909.161241	03/19/09 16:12	DL01
16WW14-031809	L09030427-10	EL.031909.162151	03/19/09 16:21	DL02
16WW22-031709	L09030427-06	EL.031909.192858	03/19/09 19:28	DL01
16WW12-031809	L09030427-07	EL.031909.193500	03/19/09 19:35	DL01
16WW12-031809-FD	L09030427-08	EL.031909.194101	03/19/09 19:41	DL01
16WW38-031809	L09030427-09	EL.031909.194703	03/19/09 19:47	DL01
16WW34-031609	L09030427-02	EL.032009.195737	03/20/09 19:57	DL01
16WW13-031709	L09030427-04	EL.032009.200339	03/20/09 20:03	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1347454
 Report generated 03/23/2009 09:22



Login Number: L09030427 Prep Date: 03/19/09 12:55 Sample ID: WG297722-02
Instrument ID: ELAN-ICP Run Date: 03/19/09 14:47 Prep Method: 3015
File ID: EL.031909.144716 Analyst: JYH Method: 6020
Workgroup (AAB#): WG297750 Matrix: Water Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: ELAN-I - 19-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Chromium, Total	0.000500	0.00200	0.000500	1	U
Manganese, Total	0.000500	0.00200	0.000500	1	U

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1347436
23-MAR-2009 09:22



Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297722-03
Instrument ID: ELAN-ICP Run Time: 14:53 Prep Method: 3015
File ID: EL.031909.145316 Analyst: JYH Method: 6020
Workgroup (AAB#): WG297750 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD30482 Cal ID: ELAN-I - 19-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chromium, Total	0.0625	0.0634	101	80 - 120	
Manganese, Total	0.0625	0.0642	103	80 - 120	

Loginnum: L09030427 Cal ID: ELAN-ICP - Worknum: WG297750
 Instrument ID: ELAN-ICP Contract #: DACA56-94-D-0020 Method: 6020
 Parent ID: WG297722-01 File ID: EL.031909.145917 Dil: 5 Matrix: WATER
 Sample ID: WG297722-04 MS File ID: EL.031909.150517 Dil: 5 Units: mg/L
 Sample ID: WG297722-05 MSD File ID: EL.031909.151119 Dil: 5

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Chromium, Total	0.143	0.0625	0.210	106	0.0625	0.220	123	4.88	75 - 125	20	
Manganese, Total	0.545	0.0625	0.618	116	0.0625	0.641	154	3.78	75 - 125	20	*

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Microbac Laboratories Inc.
Serial Dilution Report

Login: L09030427 Worknum: WG297750
Instrument: ELAN-ICP Method: 6020
Serial Dil: WG297750-02 File ID: EL.031909.152924 Dil: 5 Units: ug/L
Sample: L09030424-09 File ID: EL.031909.151720 Dil: 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Chromium	.659	F	ND	U		
Manganese	.668	F	ND	U		

U = Result is below MDL.

F = Result is greater than or equal to MDL and less than the RL.

X = Result is greater than or equal to RL and less than 100 times the MDL.

E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008

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Sample Login ID: L09030427

Worknum: WG297750

Instrument ID: ELAN-ICP

Method: 6020

Post Spike ID: WG297750-01

File ID: EL.031909.152322

Dil: 1

Units: ug/L

Sample ID: L09030424-09

File ID: EL.031909.151720

Dil: 1

Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
CHROMIUM	51.3		0.659	F	50	101.3	75 - 125	
MANGANESE	51.7		0.668	F	50	102.2	75 - 125	

N = % Recovery exceeds control limits

F = Result is between MDL and RL

U = Sample result is below MDL. A value of zero is used in the calculation

Login: L09030427 Workgroup (AAB#): WG297750
Analytical Method: 6020 Instrument ID: ELAN-ICP
ICAL Worknum: WG297826 Initial Calibration Date: 19-MAR-2009 11:51

	WG297826-01		WG297826-02		WG297826-03		WG297826-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
CHROMIUM	0	11700	.4	16600	50	518000	100	993000	.999983	
MANGANESE	0	502	.4	7000	50	794000	100	1510000	.999869	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

Login: L09030427 Workgroup (AAB#): WG297750
Analytical Method: 6020 Instrument ID: ELAN-ICP
ICAL Worknum: WG297905 Initial Calibration Date: 20-MAR-2009 13:01

	WG297905-01		WG297905-02		WG297905-03		WG297905-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
CHROMIUM	0	9630	.4	13300	50	436000	100	831000	.999959	
MANGANESE	0	349	.4	5610	50	659000	100	1280000	.999985	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-06
Instrument ID: ELAN-ICP Run Time: 12:03 Method: 6020
File ID: EL.031909.120335 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-ICP - 19-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
CHROMIUM	.2	.8	.2	U
MANGANESE	.2	.8	.2	U

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-06
Instrument ID: ELAN-ICP Run Time: 13:13 Method: 6020
File ID: EL.032009.131354 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-ICP - 20-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
CHROMIUM	.2	.8	.2	U
MANGANESE	.2	.8	.2	U

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-12
Instrument ID: ELAN-ICP Run Time: 12:42 Method: 6020
File ID: EL.031909.124258 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-16
Instrument ID: ELAN-ICP Run Time: 14:33 Method: 6020
File ID: EL.031909.143329 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-18
Instrument ID: ELAN-ICP Run Time: 15:42 Method: 6020
File ID: EL.031909.154218 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-20
Instrument ID: ELAN-ICP Run Time: 16:46 Method: 6020
File ID: EL.031909.164646 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-24
Instrument ID: ELAN-ICP Run Time: 19:10 Method: 6020
File ID: EL.031909.191043 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-26
Instrument ID: ELAN-ICP Run Time: 20:18 Method: 6020
File ID: EL.031909.201804 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

CCB - Modified 03/05/2008
PDF File ID: 1348118
Report generated 03/23/2009 09:22



Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-12
Instrument ID: ELAN-ICP Run Time: 13:53 Method: 6020
File ID: EL.032009.135317 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 20-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-22
Instrument ID: ELAN-ICP Run Time: 19:39 Method: 6020
File ID: EL.032009.193916 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 20-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-24
Instrument ID: ELAN-ICP Run Time: 20:16 Method: 6020
File ID: EL.032009.201634 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 20-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-05
Instrument ID: ELAN-ICP Run Time: 11:57 Method: 6020
File ID: EL.031909.115704 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Chromium	50	49.6	99.2	90 - 110	
Manganese	50	48.8	97.7	90 - 110	

* Exceeds LIMITS Limit

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-05
 Instrument ID: ELAN-ICP Run Time: 13:07 Method: 6020
 File ID: EL.032009.130723 Analyst: JYH Units: ug/L
 Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 20-MAR-09
 QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Chromium	50	49.6	99.2	90 - 110	
Manganese	50	49.8	99.7	90 - 110	

* Exceeds LIMITS Limit

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-11
Instrument ID: ELAN-ICP Run Time: 12:36 Method: 6020
File ID: EL.031909.123626 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Chromium	50.0	50.8	ug/L	102	90 - 110		
Manganese	50.0	50.1	ug/L	100	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-15
Instrument ID: ELAN-ICP Run Time: 14:26 Method: 6020
File ID: EL.031909.142657 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Chromium		50.0	48.9	ug/L	97.8	90 - 110		
Manganese		50.0	49.0	ug/L	98.1	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-17
Instrument ID: ELAN-ICP Run Time: 15:35 Method: 6020
File ID: EL.031909.153547 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Chromium		50.0	50.5	ug/L	101	90 - 110		
Manganese		50.0	50.1	ug/L	100	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-19
Instrument ID: ELAN-ICP Run Time: 16:40 Method: 6020
File ID: EL.031909.164015 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Chromium	50.0	48.7	ug/L	97.4	90 - 110		
Manganese	50.0	49.0	ug/L	98.0	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-23
Instrument ID: ELAN-ICP Run Time: 19:04 Method: 6020
File ID: EL.031909.190411 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Chromium	50.0	49.7	ug/L	99.4	90 - 110		
Manganese	50.0	49.3	ug/L	98.6	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/19/2009 Sample ID: WG297826-25
Instrument ID: ELAN-ICP Run Time: 20:11 Method: 6020
File ID: EL.031909.201133 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 19-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Chromium	50.0	47.1	ug/L	94.3	90 - 110		
Manganese	50.0	48.0	ug/L	96.0	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-11
Instrument ID: ELAN-ICP Run Time: 13:46 Method: 6020
File ID: EL.032009.134645 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 20-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Chromium	50.0	46.9	ug/L	93.8	90 - 110		
Manganese	50.0	46.8	ug/L	93.7	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-21
Instrument ID: ELAN-ICP Run Time: 19:32 Method: 6020
File ID: EL.032009.193244 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 20-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Chromium		50.0	48.0	ug/L	96.0	90 - 110		
Manganese		50.0	47.8	ug/L	95.6	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030427 Run Date: 03/20/2009 Sample ID: WG297905-23
Instrument ID: ELAN-ICP Run Time: 20:10 Method: 6020
File ID: EL.032009.201002 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG297750 Cal ID: ELAN-I - 20-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Chromium	50.0	49.9	ug/L	99.7	90 - 110		
Manganese	50.0	49.6	ug/L	99.2	90 - 110		

* Exceeds LIMITS Criteria

Login number: L09030427
Instrument ID: ELAN-ICP
Sol. A : WG297826-09
Sol. AB : WG297826-10

File ID: EL.031909.122319
File ID: EL.031909.122953

Workgroup (AAB#): WG297750
Method: 6020
Units: ug/L
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Chromium	NS	0.261	NS	100	102	102	
Manganese	NS	0.317	NS	100	102	102	

NS = Not spiked

* = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.

= Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

Login number: L09030427
Instrument ID: ELAN-ICP
Sol. A : WG297905-09
Sol. AB : WG297905-10

File ID: EL.032009.133338
File ID: EL.032009.134011

Workgroup (AAB#): WG297750
Method: 6020
Units: ug/L
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Chromium	NS	0.178	NS	100	98.8	98.8	
Manganese	NS	0.336	NS	100	99.0	99.0	

NS = Not spiked

* = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.

= Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

CRI - Modified 03/06/2008
PDF File ID: 1348111
Report generated 03/23/2009 09:22



INTERNAL STANDARD REPORT

Login: L09030427 Analytical Method: 6020
 Analytical Workgroup: WG297750 Matrix: 1
 Instrument: ELAN-ICP Analyst: JYH
 ICAL Date: 19-MAR-2009 11:34

Sample	Type	Run Date	BISMUTH	GERMANIUM	INDIUM	TERBIUM
			% Rec	% Rec	% Rec	% Rec
L09030424-09	SAMP	19-MAR-2009 15:17	98.128	97.947	90.466	93.679
L09030427-01	SAMP	19-MAR-2009 15:48	95.389	94.475	88.683	92.061
L09030427-03	SAMP	19-MAR-2009 16:00	94.18	91.86	85.122	88.758
L09030427-05	SAMP	19-MAR-2009 16:12	88.402	87.638	80.839	85.708
L09030427-06	SAMP	19-MAR-2009 19:28	90.395	89.536	84.46	86.792
L09030427-07	SAMP	19-MAR-2009 19:35	88.258	87.467	80.789	84.267
L09030427-08	SAMP	19-MAR-2009 19:41	87.427	88.531	80.104	84.252
L09030427-09	SAMP	19-MAR-2009 19:47	85.896	85.302	78.137	82.38
L09030427-10	SAMP	19-MAR-2009 16:21	95.817	95.018	87.159	90.121
WG297722-01	REF	19-MAR-2009 14:59	91.938	92.808	86.534	89.574
WG297722-01	REF	19-MAR-2009 16:21	95.817	95.018	87.159	90.121
WG297722-02	BLANK	19-MAR-2009 14:47	97.157	93.29	89.583	92.439
WG297722-03	LCS	19-MAR-2009 14:53	98.232	93.571	88.669	90.974
WG297722-04	MS	19-MAR-2009 15:05	92.034	93.591	85.31	89.944
WG297722-04	MS	19-MAR-2009 16:27	96.476	95.279	88.282	91.147
WG297722-05	MSD	19-MAR-2009 15:11	89.854	92.763	85.211	88.56
WG297722-05	MSD	19-MAR-2009 16:33	94.082	91.251	85.887	88.928
WG297750-01	PSPK	19-MAR-2009 15:23	97.647	97.852	90.565	94.095
WG297750-02	SERIAL	19-MAR-2009 15:29	96.89	95.424	88.56	90.871
WG297826-05	ICV	19-MAR-2009 11:57	96.519	100.975	97.347	98.974
WG297826-06	ICB	19-MAR-2009 12:03	96.986	97.065	95.823	97.195
WG297826-11	CCV	19-MAR-2009 12:36	97.078	97.543	94.478	96.915
WG297826-12	CCB	19-MAR-2009 12:42	96.024	96.424	94.542	96.309
WG297826-15	CCV	19-MAR-2009 14:26	95.077	91.966	86.324	89.649
WG297826-16	CCB	19-MAR-2009 14:33	90.674	88.481	83.989	86.62
WG297826-17	CCV	19-MAR-2009 15:35	95.422	93.601	88.318	91.154
WG297826-18	CCB	19-MAR-2009 15:42	95.759	92.883	87.921	90.754
WG297826-19	CCV	19-MAR-2009 16:40	95.007	92.989	86.194	89.176
WG297826-20	CCB	19-MAR-2009 16:46	92.661	88.281	83.035	86.392
WG297826-23	CCV	19-MAR-2009 19:04	95.469	93.986	89.793	92.284
WG297826-24	CCB	19-MAR-2009 19:10	96.233	93.524	88.485	91.462
WG297826-25	CCV	19-MAR-2009 20:11	90.363	87.15	78.513	83.363
WG297826-26	CCB	19-MAR-2009 20:18	90.906	85.759	79.127	83.976

Acceptance criteria: 30% - 120%
 Underlined recoveries are out of range

INT_STD_ICPMS - Modified 03/05/2008
 PDF File ID: 1348119
 Report generated: 03/23/2009 09:22



INTERNAL STANDARD REPORT

Login: L09030427 Analytical Method: 6020
 Analytical Workgroup: WG297750 Matrix: 1
 Instrument: ELAN-ICP Analyst: JYH
 ICAL Date: 20-MAR-2009 12:44

Sample	Type	Run Date	BISMUTH	GERMANIUM	INDIUM	TERBIUM
			% Rec	% Rec	% Rec	% Rec
L09030427-02	SAMP	20-MAR-2009 19:57	95.22	108.052	97.622	98.754
L09030427-04	SAMP	20-MAR-2009 20:03	95.974	108.218	97.316	98.366
WG297905-05	ICV	20-MAR-2009 13:07	98.742	100.526	100.563	99.842
WG297905-06	ICB	20-MAR-2009 13:13	99.156	100.629	100.647	99.567
WG297905-11	CCV	20-MAR-2009 13:46	98.926	100.662	97.995	99.208
WG297905-12	CCB	20-MAR-2009 13:53	97.727	99.234	98.912	98.097
WG297905-21	CCV	20-MAR-2009 19:32	99.158	109.393	100.797	102.326
WG297905-22	CCB	20-MAR-2009 19:39	99.092	108.58	103.38	101.328
WG297905-23	CCV	20-MAR-2009 20:10	97.865	107.724	101.248	101.073
WG297905-24	CCB	20-MAR-2009 20:16	98.959	109.501	104.087	103.351

Acceptance criteria: 30% - 120%
 Underlined recoveries are out of range

INT_STD_ICPMS - Modified 03/05/2008
 PDF File ID: 1348119
 Report generated: 03/23/2009 09:22



Login Number: L09030427

Date: 01/03/2009

Instrument ID: ELAN-ICP

Method: 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:

All analytes passed acceptance criteria at the specified concentration.

2.3 General Chemistry Data

2.3.1 Method 9056

2.3.1.1 Summary Data

LABORATORY REPORT

00087336

L09030427

03/26/09 16:12

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025

Project: Longhorn AAP

Site: LHAAP-16

P.O. Number: 389869/ 390836 (GWTP)

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
16WW32-031709	L09030427-03	300.0	15	19-MAR-09
16WW16-031709	L09030427-05	300.0	50	19-MAR-09



Report Number: **L09030427**Report Date : **March 26, 2009**

00087337

Sample Number: **L09030427-03**
Client ID: **16WW32-031709**
Matrix: **Water**
Workgroup Number: **WG298057**
Collect Date: **03/17/2009 12:05**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **15**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/23/2009 15:26**
Cal Date: **10/29/2008 15:17**
Run Date: **03/23/2009 23:34**
File ID: **I20323092334.31**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	336		3.00	1.50

Sample Number: **L09030427-05**
Client ID: **16WW16-031709**
Matrix: **Water**
Workgroup Number: **WG298057**
Collect Date: **03/17/2009 14:35**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **50**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/23/2009 15:26**
Cal Date: **10/29/2008 15:17**
Run Date: **03/23/2009 23:52**
File ID: **I20323092352.32**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	980		10.0	5.00

2.3.1.2 QC Summary Data

The concentrations (ppm) of the calibration standards and the resulting area counts are used to determine the equation of a linear or quadratic plot.

The slope and y-intercept of that line are used to calculate the quantity of the analyzed unknown samples.

$\text{Amount(ppm)} = [(\text{slope})(\text{area count of unknown}) + \text{y-intercept}](\text{dilution})$

(The slope is the amt/area also identified as the CF or calibration factor)

00087341

Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 102908 HICAL IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 8

Maintenance Log ID: 26395

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG286387 (ICAL) WG286492
 Internal STD: NA Surrogate STD: NA Calibration STD: STD29498

Comments: Samples 0005-01 (MDL-Q) and 0006-01 (MDL-Q) were analyzed at two different levels of concentration each. One level is equal to the RL's for F, Cl, Br, SO4, whereas the other level is nearest to the RL's for NO2-N, NO3-N, and PO4-P.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I21029081332.01	WG286387-01 STD #1	1	1		10/29/08 13:32
2	I21029081350.02	WG286387-02 STD #2	1	1		10/29/08 13:50
3	I21029081407.03	WG286387-03 STD #3	1	1		10/29/08 14:07
4	I21029081424.04	WG286387-04 STD #4	1	1		10/29/08 14:24
5	I21029081442.05	WG286387-05 STD #5	1	1		10/29/08 14:42
6	I21029081459.06	WG286387-06 STD #6	1	1		10/29/08 14:59
7	I21029081517.07	WG286387-07 STD #7	1	1		10/29/08 15:17
8	I21029081534.08	WG286387-08 ALT STD	1	1		10/29/08 15:34
9	I21029081551.09	ELUENT	1	1		10/29/08 15:51
10	I21029081609.10	DI WATER	1	1		10/29/08 16:09
11	I21029081626.11	WG286496-01 ANION CCV	1	1		10/29/08 16:26
12	I21029081644.12	WG286496-02 ANION CCB	1	1		10/29/08 16:44
13	I21029081701.13	WG286492-01 ANION BLANK	1	1		10/29/08 17:01
14	I21029081718.14	WG286492-02 ANION LCS	1	1		10/29/08 17:18
15	I21029081736.15	L08100005-01 MDL (F, Cl, Br, SO4)	1	1		10/29/08 17:36
16	I21029081753.16	L08100006-01 MDL (F, Cl, Br, SO4)	1	1		10/29/08 17:53
17	I21029081811.17	L08100005-01 MDL (NO2, NO3, PO4)	1	1		10/29/08 18:11
18	I21029081828.18	L08100006-01 MDL (NO2, NO3, PO4)	1	1		10/29/08 18:28
19	I21029081846.19	Test (Level #5) CCV	1	1		10/29/08 18:46
20	I21029081903.20	Test (Level #5) CCV	1	1		10/29/08 19:03
21	I21029081920.21	WG286496-03 ANION CCV	1	1		10/29/08 19:20
22	I21029081938.22	WG286496-04 ANION CCB	1	1		10/29/08 19:38
23	I21029081955.23	END	1	1		10/29/08 19:55

Comments

Seq.	Rerun	Dil.	Reason	Analytes



Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 032309 IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 9

Maintenance Log ID: 28121

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG298057
 Internal STD: NA Surrogate STD: NA Calibration STD: NA

Comments: Sample 0425-01 was analyzed at a dilution only, due to its high screen result for SO4, which was greater than 200 ppm.
 Samples 0453 (1-2) were analyzed at dilutions only, due to their high screen results for CL, which were greater than 200 ppm.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I20323091452.01	ELUENT	1	1		03/23/09 14:52
2	I20323091509.02	DI WATER	1	1		03/23/09 15:09
3	I20323091526.03	WG298060-01 ANION CCV	1	1		03/23/09 15:26
4	I20323091544.04	WG298060-02 ANION CCB	1	1		03/23/09 15:44
5	I20323091601.05	WG298057-01 ANION BLANK	1	1		03/23/09 16:01
6	I20323091619.06	WG298057-02 ANION LCS	1	1		03/23/09 16:19
7	I20323091636.07	L09030380-01 (CL, SO4)	1	1		03/23/09 16:36
8	I20323091654.08	L09030380-01 RR CL 1/4	1	4		03/23/09 16:54
9	I20323091711.09	L09030380-03 (CL, SO4) 1/4	1	4		03/23/09 17:11
10	I20323091728.10	L09030380-03 RR CL 1/20	1	20		03/23/09 17:28
11	I20323091746.11	L09030380-05 (CL, SO4) 1/5	1	5		03/23/09 17:46
12	I20323091803.12	L09030380-05 (1/20) (NR)	1	20		03/23/09 18:03
13	I20323091821.13	L09030380-07 (CL, SO4)	1	1		03/23/09 18:21
14	I20323091838.14	L09030380-07 RR CL 1/5	1	5		03/23/09 18:38
15	I20323091856.15	WG298060-03 ANION CCV	1	1		03/23/09 18:56
16	I20323091913.16	WG298060-04 ANION CCB	1	1		03/23/09 19:13
17	I20323091930.17	L09030425-03 (CL, SO4)	1	1		03/23/09 19:30
18	I20323091948.18	L09030425-01 (CL, SO4) 1/25	1	25		03/23/09 19:48
19	I20323092005.19	L09030425-05 (CL, SO4)	1	1		03/23/09 20:05
20	I20323092023.20	L09030425-05 RR CL 1/5	1	5		03/23/09 20:23
21	I20323092040.21	L09030425-07 (CL, SO4) 1/10	1	10		03/23/09 20:40
22	I20323092058.22	L09030425-09 (CL, SO4) 1/10	1	10		03/23/09 20:58
23	I20323092115.23	L09030425-11 (CL, SO4) 1/5 REF	1	5		03/23/09 21:15
24	I20323092132.24	WG298057-04 DUP 0425-11 (1/5)	1	5		03/23/09 21:32
25	I20323092150.25	WG298057-05 MS 0425-11 (1/5)	1	5		03/23/09 21:50
26	I20323092207.26	WG298057-06 MSD 0425-11 (1/5)	1	5		03/23/09 22:07
27	I20323092225.27	DI WATER	1	1		03/23/09 22:25
28	I20323092242.28	WG298060-05 ANION CCV	1	1		03/23/09 22:42
29	I20323092259.29	WG298060-06 ANION CCB	1	1		03/23/09 22:59
30	I20323092317.30	L09030425-13 (CL, SO4) 1/5	1	5		03/23/09 23:17
31	I20323092334.31	L09030427-03 (CL) 1/15	1	15		03/23/09 23:34
32	I20323092352.32	L09030427-05 (CL) 1/50	1	50		03/23/09 23:52
33	I20324090009.33	L09030453-01 (CL, SO4) 1/5	1	5		03/24/09 00:09
34	I20324090027.34	L09030453-01 RR CL 1/40	1	40		03/24/09 00:27



Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 032309 IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 9

Maintenance Log ID: 28121

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG298057
 Internal STD: NA Surrogate STD: NA NA

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
35	I20324090044.35	L09030453-02 (CL, SO4) 1/5 REF	1	5		03/24/09 00:44
36	I20324090101.36	WG298057-08 DUP 0453-02 (1/5)	1	5		03/24/09 01:01
37	I20324090119.37	L09030453-02 RR CL 1/40	1	40		03/24/09 01:19
38	I20324090136.38	WG298060-07 ANION CCV	1	1		03/24/09 01:36
39	I20324090154.39	WG298060-08 ANION CCB	1	1		03/24/09 01:54
40	I20324090211.40	END	1	1		03/24/09 02:11

Comments

Seq.	Rerun	Dil.	Reason	Analytes



Microbac Laboratories Inc.

Data Checklist

Date: 29-OCT-2008

Analyst: JWR

Analyst: NA

Method: 300/9056

Instrument: IC2

Curve Workgroup: WG286387

Runlog ID: 24978

Analytical Workgroups: 10-0005 (MDL-Q), 0006 (MDL-Q)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	X
Project/client specific requirements	NA
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
30-OCT-2008

John Richards

Secondary Reviewer:
03-NOV-2008

Michael Cohen

Microbac Laboratories Inc.

Data Checklist

Date: 23-MAR-2009

Analyst: JWR

Analyst: NA

Method: 300/9056

Instrument: IC1

Curve Workgroup: NA

Runlog ID: 27248

Analytical Workgroups: 03-0380, 0425, 0427, 0453

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
26-MAR-2009

John Richards

Secondary Reviewer:
26-MAR-2009

Michael Cohen

Analytical Method: 300.0

AAB#: WG298057

Login Number: L09030427

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW32-031709	03/17/09	03/19/09	03/23/09	28	6.14	03/23/09	28	0.339	
16WW16-031709	03/17/09	03/19/09	03/23/09	28	6.04	03/23/09	28	0.351	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

METHOD BLANK SUMMARY

Login Number: L09030427
Blank File ID: I20323091601.05
Prep Date: 03/23/09 15:26
Analyzed Date: 03/23/09 16:01
Analyst: JWR

Work Group: WG298057
Blank Sample ID: WG298057-01
Instrument ID: IC2
Method: 300.0

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298057-02	I20323091619.06	03/23/09 16:19	01
DUP	WG298057-04	I20323092132.24	03/23/09 21:32	DL01
16WW32-031709	L09030427-03	I20323092334.31	03/23/09 23:34	DL01
16WW16-031709	L09030427-05	I20323092352.32	03/23/09 23:52	DL01
DUP	WG298057-08	I20324090101.36	03/24/09 01:01	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 1351201
Report generated 03/26/2009 15:56



Login Number: L09030427 Prep Date: 03/23/09 15:26 Sample ID: WG298057-01
Instrument ID: IC2 Run Date: 03/23/09 16:01 Prep Method: 300.0
File ID: I20323091601.05 Analyst: JWR Method: 300.0
Workgroup (AAB#): WG298057 Matrix: Water Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: IC2 - 29-OCT-08

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Chloride	0.100	0.200	0.100	1	U

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1351202
26-MAR-2009 15:56



Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG298057-02
Instrument ID: IC2 Run Time: 16:19 Prep Method: 300.0
File ID: I20323091619.06 Analyst: JWR Method: 300.0
Workgroup (AAB#): WG298057 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD29498 Cal ID: IC2 - 29-OCT-08

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	6.00	6.02	100	90 - 110	

Login Number: L09030427
Analytical Method: 300.0
ICAL Workgroup: WG286387

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Chloride		8.478	9.08		0.99900

R = Correlation coefficient; 0.995 minimum

R² = Coefficient of determination; 0.99 minimum

This method always uses quadratic calibration model (R²)

Login Number: L09030427
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-01			WG286387-02			WG286387-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	0.200	0.0220000000 0	9.091	2.00	0.2220000000	9.009	4.00	0.4540000000	8.811

INT_CAL - Modified 03/06/2008
PDF File ID: 1351434
Report generated 03/26/2009 15:56



Login Number: L09030427
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-04			WG286387-05			WG286387-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	6.00	0.695000000	8.633	8.00	0.944000000	8.475	12.0	1.45300000	8.259

INT_CAL - Modified 03/06/2008
PDF File ID: 1351434
Report generated 03/26/2009 15:56



Login Number: L09030427
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-07		
	CONC	RESP	RF
Chloride	48.0	6.79200000	7.067

INT_CAL - Modified 03/06/2008
PDF File ID: 1351434
Report generated 03/26/2009 15:56



Login Number: L09030427 Run Date: 10/29/2008 Sample ID: WG286387-08
Instrument ID: IC2 Run Time: 15:34 Method: 300.0
File ID: I21029081534.08 Analyst: JWR QC Key: STD
ICal Workgroup: WG286387 Cal ID: IC2 - 29-OCT-08

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		6.00	6.16	mg/L	8.34	2.70	10	

* Exceeds %D Limit

Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG298060-02
Instrument ID: IC2 Run Time: 15:44 Method: 300.0
File ID: I20323091544.04 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298057 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG298060-04
Instrument ID: IC2 Run Time: 19:13 Method: 300.0
File ID: I20323091913.16 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298057 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG298060-06
Instrument ID: IC2 Run Time: 22:59 Method: 300.0
File ID: I20323092259.29 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298057 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/24/2009 Sample ID: WG298060-08
Instrument ID: IC2 Run Time: 01:54 Method: 300.0
File ID: I20324090154.39 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298057 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG298060-01
Instrument ID: IC2 Run Time: 15:26 Method: 300.0
File ID: I20323091526.03 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298057 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.01	mg/L	8.57	0.133	10	

* Exceeds %D Criteria

Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG298060-03
Instrument ID: IC2 Run Time: 18:56 Method: 300.0
File ID: I20323091856.15 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298057 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.09	mg/L	8.45	1.42	10	

* Exceeds %D Criteria

Login Number: L09030427 Run Date: 03/23/2009 Sample ID: WG298060-05
Instrument ID: IC2 Run Time: 22:42 Method: 300.0
File ID: I20323092242.28 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298057 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.12	mg/L	8.40	2.05	10	

* Exceeds %D Criteria

Login Number: L09030427 Run Date: 03/24/2009 Sample ID: WG298060-07
Instrument ID: IC2 Run Time: 01:36 Method: 300.0
File ID: I20324090136.38 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298057 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.13	mg/L	8.39	2.20	10	

* Exceeds %D Criteria

3.0 Attachments

Microbac Laboratories Inc.
Analyst Listing
March 26, 2009

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
AM - ALISON J. MILLER	AML - ANTHONY M. LONG	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS	CAH - CHARLES A. HALL
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CSH - CHRIS S. HILL
CTB - CHRIS T. BUCINA	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	ECL - ERIC C. LAWSON	EDA - ERIN D. AGEES
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON
JKP - JACQUELINE K. PARSONS	JKT - JANE K. THOMPSON	JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES	JYH - JI Y. HU	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LHT - LANCE H. THOMPSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MICHAEL D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	NPM - NATHANIEL P. MILLER
PDM - PIERCE D. MORRIS	RAH - ROY A. HALSTEAD	RB - ROBERT BUCHANAN
REK - ROBERT E. KYER	RLK - ROBIN L. KLINGER	RWC - RODNEY W. CAMPBELL
SAV - SARAH A. VANDENBERG	SDH - SHANA D. HINYARD	SDL - SHELLY D. LENT
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	TDH - TRICIA D. HUCK
TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WTD - WADE T. DELONG	

List of Valid Qualifiers

March 26, 2009

Qualifier: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria fail. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Undetected; the concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

***Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.



Shaw Shaw Environmental & Infrastructure, Inc.
3010 Briarpark Drive, Suite 400
Houston, TX 77042
(713) 996-4400

Chain of Custody

Laboratory Name: <u>Microbac</u>		Address: <u>158 Starlite Dr. Marietta, OH 45750</u>		Contact: <u>Stephanie Massburg 740-373-4071</u>	
Project Name: <u>USACE-LHAAP</u>		Project Location: <u>Karnack, TX</u>		Analysis and Method Desired (Indicate separate containers)	
Project No.: <u>117591-0005 B004</u>		Project Contact: <u>Praveen Srivastav</u>		Project Telephone No.: <u>713 996 4588</u>	
Point of Contact: <u>Jennifer Hoang</u>		Project Manager/Supervisor: <u>Praveen Srivastav</u>		Remarks: <u>Trip Blank included in Cooler</u>	
Telephone No.: <u>713 996 4408</u>					

Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location	Number of Containers	VOC 8260	Chloride	Chromium	Manganese			
1	16LW33-031609	03/16/09	1230		X	GW	Site 16	1			X				
2	16LW34-031609	03/16/09	1445		X	GW		1			X				
3	16LW32-031709	03/17/09	1205		X	GW		5	X	X	X				
4	16LW13-031709	03/17/09	1330		X	GW		1				X			
5	16LW16-031709	03/17/09	1435		X	GW		5	X	X	X				
6	16LW22-031709	03/17/09	1545		X	GW		1			X				
7	16LW12-031809	03/18/09	1025		X	GW		1			X				
8	16LW12-031809-FO	03/18/09	1025		X	GW		1			X				
9	16LW38-031809	03/18/09	1105		X	GW		1			X				
10	16LW14-031809	03/18/09	1145		X	GW		1			X				

Transfers Relinquished By (signature): <u>[Signature]</u>	Date/Time: <u>17:30</u>	Transfers Accepted By (signature):	Date/Time:	Special Instructions:
				<u>7 Day TAT</u>
				FedEx Airbill No.:
		Laboratory:		Sampler's Signature: <u>[Signature]</u>

TAT: Standard Rush Date: Seals Intact? Y N Received Good Condition Y N Cold

Client: <u>SHAW</u>			
Workorder Number: <u>B</u>			
Date Received: <u>3-19-09</u>			
Delivered by:	☐ Fedx	☒ UPS	☐ Client ☐ Courier Time: <u>0917</u>
Opened by: <u>ERP</u>			
IR Temp Gun:	<u>46</u>	☐ H	
Logged by: <u>ERP/sim</u>		<u>LO6030427</u>	

Cooler information

Cooler ID	Temp C	Airbill#	COC#	Other
1669	3	5204 777 494 3		

Inspection Checklist

	Y	N	NA	Discrepancy ID
Were shipping coolers sealed?	☒	☒		
Were custody seals intact?	☒	☒		
Were cooler temperatures in range of 0 - 6?	☒	☒		
Was ice present?	☒	☒		
Were COC's received/ information complete/signed and dated?	☒	☒		<u>① ERP</u>
Were sample containers and labels intact and match COC?	☒	☒		
Were the correct containers and volumes received?	☒	☒		
Were correct preservatives used? (water only)	☒	☒		
Were pH ranges acceptable? (voa's excluded)	☒	☒		
Were VOA samples free of headspace (< 6mm)?	☒	☒		
Were samples received within EPA hold times?	☒	☒		

Discrepancy/Comments/Other Problems

<u>① No trips on COC Received 2 bottles</u>

Distribution

Name of Microbac representative:
Client/Company:
Person Contacted:
Date contacted:

Resolution/other comments:

Internal Chain of Custody Report

Login: L09030427

Account: 2773

Project: 2773.025

Samples: 11

Due Date: 26-MAR-2009

Samplenum **Container ID** **Products**
L09030427-02 563705 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

Samplenum **Container ID** **Products**
L09030427-04 563709 MN-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

Samplenum **Container ID** **Products**
L09030427-01 563704 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

Samplenum **Container ID** **Products**
L09030427-07 563714 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030427

Account: 2773

Project: 2773.025

Samples: 11

Due Date: 26-MAR-2009

Samplenum **Container ID** **Products**
L09030427-05 563712 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

Samplenum **Container ID** **Products**
L09030427-03 563706 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	19-MAR-2009 11:39	ERE	
2	ANALYZ	V1	ORG4	19-MAR-2009 15:27	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	19-MAR-2009 11:39	ERE	
2	ANALYZ	V1	ORG4	19-MAR-2009 15:27	MRT	RLK

Samplenum **Container ID** **Products**
L09030427-05 563710 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	19-MAR-2009 11:39	ERE	
2	ANALYZ	V1	ORG4	19-MAR-2009 15:27	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	19-MAR-2009 11:39	ERE	
2	ANALYZ	V1	ORG4	19-MAR-2009 15:27	MRT	RLK

Samplenum **Container ID** **Products**
L09030427-09 563716 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:31	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030427

Account: 2773

Project: 2773.025

Samples: 11

Due Date: 26-MAR-2009

Samplenum **Container ID** **Products**
L09030427-05 563711 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	SEM	20-MAR-2009 12:17	CPD	RLK
3	STORE	SEM	A1	25-MAR-2009 09:49	JKT	CPD

Samplenum **Container ID** **Products**
L09030427-03 563708 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

Samplenum **Container ID** **Products**
L09030427-03 563707 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	SEM	20-MAR-2009 12:17	CPD	RLK
3	STORE	SEM	A1	25-MAR-2009 09:49	JKT	CPD

Samplenum **Container ID** **Products**
L09030427-10 563717 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:31	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030427

Account: 2773

Project: 2773.025

Samples: 11

Due Date: 26-MAR-2009

Samplenum **Container ID** **Products**
L09030427-06 563713 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

Samplenum **Container ID** **Products**
L09030427-08 563715 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	19-MAR-2009 11:39	ERE	
2	PREP	W1	DIG	19-MAR-2009 12:32	VC	ERE
3	EXTRACT	DIG	METALS	19-MAR-2009 12:42		VC
4	STORE	DIG	A1	19-MAR-2009 15:15	ERE	REK

Samplenum **Container ID** **Products**
L09030427-11 563718 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	19-MAR-2009 11:44	ERE	
2	ANALYZ	V1	ORG4	19-MAR-2009 15:27	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	19-MAR-2009 11:44	ERE	
2	ANALYZ	V1	ORG4	19-MAR-2009 15:27	MRT	RLK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



ANALYTICAL REPORT

Job Number: 680-45913-1

Job Description: Shaw Longhorn

For:

Microbac Laboratories, Inc.

158 Starlite Drive

Marietta, OH 45750

Attention: Ms. Stephanie Mossburg



Approved for release.
Bernard Kirkland
Project Manager I
3/31/2009 5:54 PM

Designee for
Sheila Hoffman
Project Manager I
sheila.hoffman@testamericainc.com
03/31/2009

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

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TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404

Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com



Job Narrative
680-J45913-1**Receipt**

All samples were received in good condition within temperature requirements.

General Chemistry

Method(s) 314.0: Samples 680-45913-10 and -16 were analyzed at dilutions due to the Matrix Conductivity Threshold of the instrument. The reporting limits have been adjusted accordingly.

Method(s) 314.0: Sample 680-45913-15 was analyzed at a dilution of 1:20 due to the Matrix Conductivity Threshold of the instrument. The reporting limit has been adjusted accordingly.

Method(s) 314.0: The following samples 16WW21-032409 (680-45913-5), 16WW24-031909 (680-45913-4), 16WW32-031709 (680-45913-1), 16WW35-031909 (680-45913-3) required a dilution due to the matrix conductivity threshold of the instrument. The reporting limit has been adjusted accordingly.

No other analytical or quality issues were noted.

METHOD SUMMARY

Client: Microbac Laboratories, Inc.

Job Number: 680-45913-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Perchlorate (IC)	TAL SAV	EPA 314.0	

Lab References:

TAL SAV = TestAmerica Savannah

Method References:

EPA = US Environmental Protection Agency

SAMPLE SUMMARY

Client: Microbac Laboratories, Inc.

Job Number: 680-45913-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-45913-1	16WW32-031709	Water	03/17/2009 1205	03/28/2009 1010
680-45913-2	16WW16-031709	Water	03/17/2009 1435	03/28/2009 1010
680-45913-3	16WW35-031909	Water	03/19/2009 0910	03/28/2009 1010
680-45913-4	16WW24-031909	Water	03/19/2009 1130	03/28/2009 1010
680-45913-5	16WW21-032409	Water	03/24/2009 1015	03/28/2009 1010
680-45913-6	16WW21-032409-1D	Water	03/24/2009 1015	03/28/2009 1010
680-45913-7	16WW41-032409	Water	03/24/2009 1045	03/28/2009 1010
680-45913-8	16WW42-032409	Water	03/24/2009 1415	03/28/2009 1010
680-45913-9	16WW31-032409	Water	03/24/2009 1315	03/28/2009 1010
680-45913-10	16WW40-032509	Water	03/25/2009 1530	03/28/2009 1010
680-45913-11	16EW08-032709	Water	03/27/2009 1625	03/28/2009 1010
680-45913-12	16EW07-032709	Water	03/27/2009 1430	03/28/2009 1010
680-45913-13	16EW06-032709	Water	03/27/2009 1115	03/28/2009 1010
680-45913-14	16EW05-032709	Water	03/27/2009 0830	03/28/2009 1010
680-45913-15	16EW04-032609	Water	03/26/2009 1705	03/28/2009 1010
680-45913-16	16EW03-032609	Water	03/26/2009 1310	03/28/2009 1010
680-45913-17	16EW02-032609	Water	03/26/2009 1200	03/28/2009 1010
680-45913-18	16EW01-032609	Water	03/26/2009 1000	03/28/2009 1010

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW32-031709

Lab Sample ID: 680-45913-1
Client Matrix: Water

Date Sampled: 03/17/2009 12:05
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	0.55	U		0.11	1.0	0.55	ug/L	134027	03/30/2009 14:33	5	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW16-031709

Lab Sample ID: 680-45913-2
Client Matrix: Water

Date Sampled: 03/17/2009 14:35
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	240			0.11	1.0	1.1	ug/L	134027	03/30/2009 14:48	10	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW35-031909

Lab Sample ID: 680-45913-3
Client Matrix: Water

Date Sampled: 03/19/2009 09:10
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	5.5	U		0.11	1.0	5.5	ug/L	134027	03/30/2009 15:33	50	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW24-031909

Lab Sample ID: 680-45913-4
Client Matrix: Water

Date Sampled: 03/19/2009 11:30
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	1.1	U		0.11	1.0	1.1	ug/L	134027	03/30/2009 16:03	10	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW21-032409

Lab Sample ID: 680-45913-5
Client Matrix: Water

Date Sampled: 03/24/2009 10:15
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	0.22	U		0.11	1.0	0.22	ug/L	134027	03/30/2009 16:33	2	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW21-032409-1D

Lab Sample ID: 680-45913-6
Client Matrix: Water

Date Sampled: 03/24/2009 10:15
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	0.11	U		0.11	1.0	0.11	ug/L	134027	03/30/2009 17:18	1	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW41-032409

Lab Sample ID: 680-45913-7
Client Matrix: Water

Date Sampled: 03/24/2009 10:45
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	250			0.11	1.0	5.5	ug/L	134031	03/31/2009 14:16	50	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW42-032409

Lab Sample ID: 680-45913-8
Client Matrix: Water

Date Sampled: 03/24/2009 14:15
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	0.22	U		0.11	1.0	0.22	ug/L	134027	03/30/2009 19:18	2	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW31-032409

Lab Sample ID: 680-45913-9
Client Matrix: Water

Date Sampled: 03/24/2009 13:15
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	0.22	U		0.11	1.0	0.22	ug/L	134027	03/30/2009 19:48	2	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW40-032509

Lab Sample ID: 680-45913-10
Client Matrix: Water

Date Sampled: 03/25/2009 15:30
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	1.1	U		0.11	1.0	1.1	ug/L	134028	03/30/2009 22:48	10	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW08-032709

Lab Sample ID: 680-45913-11
Client Matrix: Water

Date Sampled: 03/27/2009 16:25
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	51			0.11	1.0	1.1	ug/L	134028	03/30/2009 23:18	10	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW07-032709

Lab Sample ID: 680-45913-12
Client Matrix: Water

Date Sampled: 03/27/2009 14:30
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	490			0.11	1.0	2.2	ug/L	134031	03/31/2009 13:31	20	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW06-032709

Lab Sample ID: 680-45913-13
Client Matrix: Water

Date Sampled: 03/27/2009 11:15
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	270			0.11	1.0	2.2	ug/L	134028	03/31/2009 00:18	20	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW05-032709

Lab Sample ID: 680-45913-14
Client Matrix: Water

Date Sampled: 03/27/2009 08:30
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	710			0.11	1.0	5.5	ug/L	134031	03/31/2009 15:46	50	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW04-032609

Lab Sample ID: 680-45913-15
Client Matrix: Water

Date Sampled: 03/26/2009 17:05
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	2.2	U		0.11	1.0	2.2	ug/L	134031	03/31/2009 13:46	20	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW03-032609

Lab Sample ID: 680-45913-16
Client Matrix: Water

Date Sampled: 03/26/2009 13:10
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	2.2	U		0.11	1.0	2.2	ug/L	134028	03/31/2009 02:18	20	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW02-032609

Lab Sample ID: 680-45913-17
Client Matrix: Water

Date Sampled: 03/26/2009 12:00
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	ML	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	39			0.11	1.0	2.2	ug/L	134028	03/31/2009 02:48	20	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45913-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16EW01-032609

Lab Sample ID: 680-45913-18
Client Matrix: Water

Date Sampled: 03/26/2009 10:00
Date Received: 03/28/2009 10:10

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	910			0.11	1.0	2.2	ug/L	134028	03/31/2009 03:48	20	CB

DATA REPORTING QUALIFIERS

Client: Microbac Laboratories, Inc.

Job Number: 680-45913-1

Lab Section	Qualifier	Description
HPLC	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Microbac Laboratories, Inc.

Job Number: 680-45913-1

Method Blank - Batch: 680-134027

Lab Sample ID: MB 680-134027/8
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2009 1303
Date Prepared: N/A

Analysis Batch: 680-134027
Prep Batch: N/A
Units: ug/L

Method: 314.0
Preparation: N/A

Instrument ID: ICCS200 - H
Lab File ID: 0012.d
Initial Weight/Volume:
Final Weight/Volume: 5 mL
Injection Volume: 0.25 uL

Analyte	Result	Qual	MDL	RL
Perchlorate	0.11	U	0.11	1.0

Lab Control Spike - Batch: 680-134027

Lab Sample ID: LCS 680-134027/22
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2009 1348
Date Prepared: N/A

Analysis Batch: 680-134027
Prep Batch: N/A
Units: ug/L

Method: 314.0
Preparation: N/A

Instrument ID: ICCS200 - H
Lab File ID: 0015.d
Initial Weight/Volume:
Final Weight/Volume: 5 mL
Injection Volume: 0.25 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Perchlorate	10.0	10.1	101	85 - 115	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Microbac Laboratories, Inc.

Job Number: 680-45913-1

Method Blank - Batch: 680-134028

Lab Sample ID: MB 680-134028/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2009 2133
Date Prepared: N/A

Analysis Batch: 680-134028
Prep Batch: N/A
Units: ug/L

Method: 314.0
Preparation: N/A

Instrument ID: ICCS200 - H
Lab File ID: 0046.d
Initial Weight/Volume:
Final Weight/Volume: 5 mL
Injection Volume: 0.25 uL

Analyte	Result	Qual	MDL	RL
Perchlorate	0.11	U	0.11	1.0

Lab Control Spike - Batch: 680-134028

Lab Sample ID: LCS 680-134028/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 03/30/2009 2203
Date Prepared: N/A

Analysis Batch: 680-134028
Prep Batch: N/A
Units: ug/L

Method: 314.0
Preparation: N/A

Instrument ID: ICCS200 - H
Lab File ID: 0048.d
Initial Weight/Volume:
Final Weight/Volume: 5 mL
Injection Volume: 0.25 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Perchlorate	10.0	10.4	104	85 - 115	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Microbac Laboratories, Inc.

Job Number: 680-45913-1

Method Blank - Batch: 680-134031

Lab Sample ID: MB 680-134031/2
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 03/31/2009 1116
 Date Prepared: N/A

Analysis Batch: 680-134031
 Prep Batch: N/A
 Units: ug/L

Method: 314.0
Preparation: N/A

Instrument ID: ICCS200 - H
 Lab File ID: 0005.d
 Initial Weight/Volume:
 Final Weight/Volume: 5 mL
 Injection Volume: 0.25 uL

Analyte	Result	Qual	MDL	RL
Perchlorate	0.11	U	0.11	1.0

**Lab Control Spike/
 Lab Control Spike Duplicate Recovery Report - Batch: 680-134031**
Method: 314.0
Preparation: N/A

LCS Lab Sample ID: LCS 680-134031/4
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 03/31/2009 1146
 Date Prepared: N/A

Analysis Batch: 680-134031
 Prep Batch: N/A
 Units: ug/L

Instrument ID: ICCS200 - H
 Lab File ID: 0007.d
 Initial Weight/Volume:
 Final Weight/Volume: 5 mL
 Injection Volume: 0.25 uL

LCSD Lab Sample ID: LCSD 680-134031/5
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 03/31/2009 1201
 Date Prepared: N/A

Analysis Batch: 680-134031
 Prep Batch: N/A
 Units: ug/L

Instrument ID: ICCS200 - H
 Lab File ID: 0008.d
 Initial Weight/Volume:
 Final Weight/Volume: 5 mL
 Injection Volume: 0.25 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Perchlorate	105	99	85 - 115	6	15		

Calculations are performed before rounding to avoid round-off errors in calculated results.



TestAmerica Savannah
 TRRP Laboratory Data Package Cover Page
 SDG / Log #: 080 45913
 Fraction: Perchlorate

This data package consists of this signature page, the Laboratory Review Checklist, and the following reportable data:

- ☒ Field chain-of-custody documentation
- ☒ Sample identification cross-reference
- ☒ Test reports (analytical data sheets) for each environmental sample that includes:
 - Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - Dilution factors
 - Preparation methods
 - Clean-up methods
 - TICs (if required for the project)
- ☐ Surrogate recovery data including:
 - Calculated %R
 - Laboratory surrogate QC limits
- ☒ Test reports / Summary forms for blank samples
- ☒ Test reports / Summary forms for laboratory control samples (LCSs) including:
 - LCS spiking amounts
 - Calculated %R for each analyte
 - Laboratory LCS QC limits
- ☐ Test reports for project matrix spike/matrix spike duplicates (MS/MSD) including:
 - Samples associated with MS/MSD clearly identified
 - MS/MSD spiking amounts
 - Concentration of each MS/MSD analyte measured in the parent and spiked samples
 - Calculated %Rs and relative percent differences (RPD)
 - Laboratory MS/MSD QC limits
- ☐ Laboratory analytical duplicate (if applicable) recovery and precision
 - Amount of analyte measured in the duplicate
 - Calculated RPD
 - Laboratory QC limits for analytical duplicates
- ☒ List of method quantitation limits for each analyte for each method and matrix
- ☒ Other problems and anomalies
- ☒ The Exception Report for every "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist

Release Statement: *I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory as having potential to affect the quality of the data have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.*

Bernard Kirkland Bernard Kirkland Dir of Project Management 3/31/09
 Name (Printed) Signature Official Title Date

Date: 03.31.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134027, 134028, and 134031
Instrument ID: ICH

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI (QA/PM)	Chain-of-Custody (COC)					
		Did each sample meet the laboratory's sample acceptance policy upon receipt? (This includes cooler temperatures, sample IDs, correct COC, etc.)	X				
		Are all sample receipt issues described in an exception report and noted in the case narrative?	X				
R2	OI (QA/PM)	Sample and Quality Control (QC) Identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers? (This information is included in the case narrative table and/or LIMS report.)	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data? (This information is included on the forms and/or LIMS report.)	X				
R3	OI	Test Reports					
		Were all samples prepared within holding times?	X				
		Were all samples analyzed within holding times?	X				
		Were all hits >MQL (RL) within the instrument's calibration range?	X				
		If hits are not within the calibration range, have the data been flagged with the appropriate qualifiers and additional runs reported?			X		
		Were calculations reviewed by a peer or supervisor?	X				
		Were analyte identifications reviewed by a peer or supervisor?	X				
		Were sample quantitation limits reported for all undetected analytes? (This information is included on the forms and/or LIMS report.)	X				
		Were the results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		If required for the project, were TICs reported?			X		
R4	O	Surrogate Recovery Data					
		Were surrogates added prior to extraction, as required by the method?			X		
		Were all surrogate percent recoveries within the laboratory QC limits? (Note ANY failing surrogate in the Exception Report.)			X		
R5	OI	Test Reports / Summary Forms for Blanks					
		Were the appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL (RL)?	X				
R6	OI	Laboratory Control Samples (LCS):					
		Were all COCs included in the LCS? (Were full-list spikes used?)	X				
		Was each LCS taken through the entire analytical procedure, including preparation and, if applicable, cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) % Rs within laboratory QC limits? (Note ANY failing spike analyte in the Exception Report.)	X				
		If performed, was the LCSD %RPD within QC limits? (Note ANY failing spike analyte in the Exception Report.)	X				
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were the MS/MSD analyzed at the appropriate frequency?	X				
		Were MS/MSD %Rs within the laboratory QC limits? (Note ANY failing spike analyte in the Exception Report.)	X				
		Were MS/MSD RPDs within laboratory QC limits? (Note ANY failing spike analyte in the Exception Report.)	X				

Date: 03.31.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134027, 134028, and 134031
Instrument ID: ICH

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R8	I	Analytical Duplicate Data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method Quantitation Limits (MQLs):					
		Are the MQLs (RLs) for each analyte included in the laboratory data package? (This information is included on the forms and/or LIMS report.)	X				
		Do the MQLs (RLs) correspond to the concentration of the lowest non-zero calibration standard, where applicable?	X				
		Have the unadjusted MQLs (RLs) been included in the laboratory data package? (This information is included on the forms and/or LIMS report.)	X				
R10	OI	Other Problems/Anomalies					
		Are all known problems, anomalies, and/or special conditions noted in the Laboratory Review Checklist and the Exception Report?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SQL (RL) to minimize the matrix interference effects on the sample results, as applicable?	X				
S1	OI	Initial Calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSD or correlation coefficient criteria met? (Note ANY use of Grand Mean in the Exception Report.)	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard? (Note any ICV outliers in the Exception Report.)	X				
S2	OI	Initial & Continuing Calibration Verification (ICCV & CCV)					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits? (Note ANY use of Grand Mean in the Exception Report.)	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass Spectral Tuning:					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	OI	Internal Standards (IS):					
		Were IS area counts within the method-required QC limits?			X		
		Were IS retention times within the method-required QC limits?			X		
S5	OI	Raw Data					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				1
S6	O	Dual Column Confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results:					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, Post Digestion Spikes, and Method of Standard Additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		2

SDG / Log #: 68045913/ 680-45913

Fraction: 314.0

Date: 03.31.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134027, 134028, and 134031
Instrument ID: ICH

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S10	OI	Method Detection Limit (MDL) Studies					
		Has an MDL study been performed for each analyte?	X				
		Has a DCS been performed for each analyte within the last 3 months? (If not, then list the estimated completion date in the Exception Report.)	X				
		Does the DCS meet the acceptance criteria and support the MDL?	X				
		If the DCS does not meet criteria, has the associated MDL been raised to the appropriate level?	X				
S11	OI	Proficiency Test Reports:					
		Has the laboratory participated in the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		Are all standards used NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound / Analyte Identification Procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		Has a DOC been performed as is consistent with NELAC Chapter 5C or ISO/IEC 4 for each analyst and analyte associated with this analysis?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification / Validation Documentation for Methods					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		Are laboratory SOPs current and on file for each method performed?	X				

- Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
- O = organic analyses; I = inorganic analyses; PM = Project Management; QA = Quality Assurance
- NA = Not applicable.
- NR = Not Reviewed.
- ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

SDG / Log #: 68045913/ 680-45913

Fraction: 314.0

Date: 03.31.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134027, 134028, and 134031
Instrument ID: ICH

Exception Reports	
ER # ¹	DESCRIPTION
1	Samples 680-45913-7, 11, 13, 14, and 17 required a manual integration due to an unresolved baseline.
2	Samples 680-45913-1, 3-5, 8-10, and 15-16 required a dilution due to the matrix conductivity threshold of the instrument. The reporting limit has been adjusted accordingly.
3	
4	

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LCR).

Chain of Custody

Shaw® Shaw Environmental & Infrastructure, Inc.
 3010 Briarpark Drive, Suite 400
 Houston, TX 77042
 (713) 996-4400

Laboratory Name: <u>Test America</u>		Address: <u>5102 Loloche Ave</u>		Contact: <u>Sheila Holtman</u>	
Project Name: <u>USAE-LHAAP</u>		Project Location: <u>Karnack, TX</u>		Analysis and Method Desired (Indicate separate containers)	
Project No.: <u>117591-00058004</u>		Project Contact: <u>Praveen Sivastan</u>		Number of Containers	
Point of Contact: <u>Geuniter Hoang</u>		Project Telephone No.: <u>713 996 4588</u>		Remarks	
Telephone No.: <u>713 996 4408</u>		Project Manager/Supervisor: <u>Praveen Sivastan</u>			

Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location	Date/Time	Special Instructions
1	16WW32-031709	3/17/09	12:05		X	GW	Site 16		
2	16WW16-031709	3/17/09	14:35		X	GW	Site 16		
3	16WW35-031909	3/19/09	09:10		X	GW	Site 16		
4	16WW24-031909	3/19/09	11:30		X	GW	Site 16		
5	16WW21-032409	3/19/09	10:15		X	GW	Site 16		
6	16WW21-032409	3/19/09	10:15		X	GW	Site 16		
7	16WW41-032409	3/19/09	10:45		X	GW	Site 16		
8	16WW42-032409	3/19/09	14:15		X	GW	Site 16		
9	16WW31-032409	3/19/09	13:15		X	GW	Site 16		630-45913
10	16WW40-032509	3/25/09	15:30		X	GW	Site 16		0.7°C

Transfers Relinquished By (signature) [Signature] Date/Time 3/27/09 17:15

Transfers Accepted By (signature) [Signature] Date/Time 3/28/09 10:00

Special Instructions: 48 hr TAT

FedEx Airbill No.: _____

Sampler's Signature [Signature]

Received Good Condition Y ☐ N ☐

Laboratory

TAT: 48 hr Standard _____ Rush Date _____

Chain of Custody

NO. 5815

Shaw® Shaw Environmental & Infrastructure, Inc.
3010 Briarpark Drive, Suite 400
Houston, TX 77042
(713) 996-4400

Laboratory Name: TEST America		Address: 5102 La Roche Ave Savannah, Ga		Contact: Sheila Hoffman			
Project Name: USACE - LHMHP	Project Location: Karnack, Tx	Analysis and Method Desired (Indicate separate containers)					
Project No.: 117591.0005B004	Project Contact: Praveen Srivastava	Number of Containers					
Point of Contact: Jennifer Hoang	Project Telephone No.: Praveen Srivastava	Remarks					
Telephone No.: 713 996-4408	Project Manager/Supervisor: Praveen Srivastava						
Sample No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location
1	16EW08-032709	3/21/09	16:25		X	W	Site 16
2	16EW07-032709	3/21/09	14:30		X	W	" "
3	16EW06-032709	3/21/09	11:15		X	W	" "
4	16EW05-032709	3/21/09	8:30		X	W	" "
5	16EW04-032609	3/21/09	17:05		X	W	" "
6	16EW03-032609	3/21/09	13:10		X	W	" "
7	16EW02-032609	3/21/09	12:06		X	W	" "
8	16EW01-032609	3/21/09	10:00		X	W	" "
9	16EW00-032509	3/21/09	17:26		X	W	" "
10	16EW36-032604	3/21/09	0800		X	W	" "
Transfers Relinquished By (signature)		Date/Time		Transfers Accepted By (signature)		Date/Time	
<i>M. M.</i>		3/21/09 17:16					
TAT: 48 hr		Standard		Rush Date		Seals Intact? Y N	
Received Good Condition		Y N		Received Good Condition		Y N Cold	
FedEx Airbill No.:		Sampler's Signature		Special Instructions			
		<i>M. M.</i>		* 48-hr TAT *			

00087404



158 Starlite Drive, Marietta, OH 45750 • T:740-373-4071 • F:740-373-4835 • <http://www.microbac.com>

Laboratory Report Number: L09030497

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories.

Review and compilation of your report was completed by Microbac's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Kathy Albertson	<i>Team Chemist/Data Specialist</i>	kalbertson@microbac.com
Stephanie Mossburg	<i>Team Chemist/Data Specialist</i>	smossburg@microbac.com
Tony Long	<i>Team Chemist/Data Specialist</i>	tlong@microbac.com
Amanda Fickiesen	<i>Client Services Specialist</i>	afickiesen@microbac.com
Annie Brown	<i>Client Services Specialist</i>	abrown@microbac.com
Jacqueline Parsons	<i>Team Assistant</i>	jparsons@microbac.com

This report was reviewed on April 01, 2009.

A handwritten signature in cursive script that reads "Stephanie Mossburg".

Stephanie Mossburg - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories.

This report was certified on April 01, 2009.

A handwritten signature in cursive script that reads "David E. Vandenberg".

David Vandenberg - Managing Director

State of origin: Texas

Accrediting authority: Texas Commission on Environmental Quality ID:T104704252-07-TX

QAPP: Microbac OVD

This report contains a total of 172 pages.

Look closer. Go further. Do more.



Microbac REPORT L09030497
PREPARED FOR Shaw E I, Inc.
WORK ID: LHAAP-16

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1.0 Introduction

Microbac Laboratories Inc.
REPORT NARRATIVE

Microbac Login No: L09030497

CHAIN OF CUSTODY: The chain of custody number was 5816.

SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 4 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 26-MAR-09
<i>Stephanie Mousling</i>

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each environmental sample that includes:

- a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
- b) dilution factors,
- c) preparation methods,
- d) Cleanup methods, and
- e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

- a) Calculated recovery (%R) for each analyte, and
- b) The laboratory's surrogate QC limits.

R5 Test reports/summary forms for blank samples;

R6 Test reports/summary forms FOR laboratory control samples (LCSs) including:

- a) LCS spiking amount,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %R and relative percent differences (RPDs), and
- e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) recovery and precision:

- a) the amount of analyte measured in the duplicate,
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

MAREN M. BEERY



Metals Supervisor

April 1, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030497
 Project Name: 798-LONGHORN
 Method: 6020
 Prep Batch Number(s): WG298079
 Reviewer Name: MAREN M. BEERY
 LRC Date: April 01, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				ER2
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <RL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?			✓		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				ER1
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?			✓		
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <RL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?	✓				
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?	✓				
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NA(2)	NA(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name:	Microbac Laboratories Inc.
Laboratory Log Number:	L09030497
Project Name:	798-LONGHORN
Method:	6020
Prep Batch Number(s):	WG298079
Reviewer Name:	MAREN M. BEERY
LRC Date:	April 01, 2009

EXCEPTIONS REPORT

ER#1 - Due to the dark color of the digestate, client sample 01 was analyzed at dilutions for all analytes.

ER2 - Client samples 01, 03 and 04 required additional dilution analyses in order to obtain results for manganese within the linear range. Client sample 02 required dilution analysis in order to obtain a result for chromium within the linear range.

Footnotes:

(1) NA = Not applicable to method or project

(2) NR = Not reviewed

(3) ER# = Exception report number

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

- ✓R1 Field chain-of-custody documentation;
- ✓R2 sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - b) dilution factors,
 - c) preparation methods,
 - d) Cleanup methods, and
 - e) If required for the project, tentatively identified compounds (TICs)
- ✓R4 Surrogate recovery data including:
 - a) Calculated recovery (%R) for each analyte, and
 - b) The laboratory's surrogate QC limits.
- ✓R5 Test reports/summary forms for blank samples;
- ✓R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amount,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- ✓R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %R and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- ✓R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- ✓R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- ✓R10 Other problems or anomalies.
- ✓The exception Report for every "No" or "Not Reviewed (NR)" item IN laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

MIKE D. ALBERTSON



Volatiles Lab Supervisor

March 27, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030497
 Project Name: 798-LONGHORN
 Method: 8260B
 Prep Batch Number(s): WG298271, WG298376
 Reviewer Name: MIKE D. ALBERTSON
 LRC Date: March 27, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?	✓				
Were surrogate percent recoveries in all samples within the laboratory QC limits?		✓			1
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		✓			2
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?	✓				
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NA(2)	NA(3)
Were MS/MSD RPDs within laboratory QC limits?			✓		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			✓		
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?	✓				
Were ion abundance data within the method-required QC limits?	✓				
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?	✓				
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?	✓				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NR(2)	ER(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

EXCEPTIONS REPORT

ER# - Description

- 1) Dibromofluoromethane exceeded the upper control limit in the method blank analyzed 03/26/09.
- 2) 2-Butanone and 2-hexanone exceeded the upper advisory limits in the LCS/LCSD analyzed 03/26/09. 2-Butanone and 2-hexanone exceeded the upper advisory limits and isopropylbenzene was below the lower advisory limit in the LCS analyzed 03/27/09.

Footnotes:

- (1) NA = Not applicable to method or project
- (2) NR = Not reviewed
- (3) ER# = Exception report number

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each environmental sample that includes:

- a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
- b) dilution factors,
- c) preparation methods,
- d) Cleanup methods, and
- e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

- a) Calculated recovery (%R) for each analyte, and
- b) The laboratory's surrogate QC limits.

✓ R5 Test reports/summary forms for blank samples;

✓ R6 Test reports/summary forms for laboratory control samples (LCSs) including:

- a) LCS spiking amount,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %R and relative percent differences (RPDs), and
- e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) recovery and precision:

- a) the amount of analyte measured in the duplicate,
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

✓ The exception Report for every "No" or "Not Reviewed (NR)" item IN laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

ERIC C. LAWSON



March 25, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030497
 Project Name: 798-LONGHORN
 Method: 9056
 Prep Batch Number(s): WG298116
 Reviewer Name: ERIC C. LAWSON
 LRC Date: March 24, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?			✓		
Were % moisture (or solids) reported for all soil and sediment samples?			✓		
If required for the project, TICs reported?	✓				
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?	✓				
Were MS/MSD analyzed at the appropriate frequency?	✓				
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	✓				

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?	✓				
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?	✓				
Were analytical duplicates analyzed at the appropriate frequency?	✓				
Were RPDs or relative standard deviations within the laboratory QC limits?	✓				
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				1
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?	✓				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NA(2)	NA(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name:	Microbac Laboratories Inc.
Laboratory Log Number:	L09030497
Project Name:	798-LONGHORN
Method:	9056
Prep Batch Number(s):	WG298116
Reviewer Name:	ERIC C. LAWSON
LRC Date:	March 24, 2009

EXCEPTIONS REPORT

ER# - Description

1. Samples -01 and -02 were analyzed at dilutions only, due to their high screen results for SO₄, which were greater than 200 ppm.
- (1) NA = Not applicable to method or project
- (2) NR = Not reviewed
- (3) ER# = Exception report number

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

LABORATORY REPORT

00087426

L09030497

04/01/09 10:22

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025

Project: Longhorn AAP

Site: LHAAP-16

P.O. Number: 389869/ 390836 (GWTP)

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
16WW35-031909	L09030497-01	8260B	25	24-MAR-09
16WW35-031909	L09030497-01	8260B	10	24-MAR-09
16WW24-031909	L09030497-02	8260B	1	24-MAR-09



Sample Number: **L09030497-01**
Client ID: **16WW35-031909**
Matrix: **Water**
Workgroup Number: **WG298271**
Collect Date: **03/19/2009 09:10**
Sample Tag: **DL02**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **25**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **03/26/2009 13:16**
Cal Date: **03/18/2009 15:23**
Run Date: **03/26/2009 13:16**
File ID: **10M71351**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	250	62.5
Benzene	71-43-2		U	25.0	3.13
Bromobenzene	108-86-1		U	25.0	3.13
Bromochloromethane	74-97-5		U	25.0	5.00
Bromodichloromethane	75-27-4		U	25.0	6.25
Bromoform	75-25-2		U	25.0	12.5
Bromomethane	74-83-9		U	25.0	12.5
2-Butanone	78-93-3		U	250	62.5
n-Butylbenzene	104-51-8		U	25.0	6.25
sec-Butylbenzene	135-98-8		U	25.0	6.25
tert-Butylbenzene	98-06-6		U	25.0	6.25
Carbon disulfide	75-15-0		U	25.0	12.5
Carbon tetrachloride	56-23-5		U	25.0	6.25
Chlorobenzene	108-90-7		U	25.0	3.13
Chlorodibromomethane	124-48-1		U	25.0	6.25
Chloroethane	75-00-3		U	25.0	12.5
2-Chloroethyl vinyl ether	110-75-8		U	250	50.0
Chloroform	67-66-3		U	25.0	3.13
Chloromethane	74-87-3		U	25.0	6.25
2-Chlorotoluene	95-49-8		U	25.0	3.13
4-Chlorotoluene	106-43-4		U	25.0	6.25
1,2-Dibromo-3-chloropropane	96-12-8		U	125	25.0
1,2-Dibromoethane	106-93-4		U	25.0	6.25
Dibromomethane	74-95-3		U	25.0	6.25
1,2-Dichlorobenzene	95-50-1		U	25.0	3.13
1,3-Dichlorobenzene	541-73-1		U	25.0	6.25
1,4-Dichlorobenzene	106-46-7		U	25.0	3.13
Dichlorodifluoromethane	75-71-8		U	25.0	6.25
1,1-Dichloroethane	75-34-3		U	25.0	3.13
1,2-Dichloroethane	107-06-2		U	25.0	6.25
1,1-Dichloroethene	75-35-4	17.4	J	25.0	12.5
cis-1,2-Dichloroethene	156-59-2	128		25.0	6.25
trans-1,2-Dichloroethene	156-60-5		U	25.0	6.25
1,2-Dichloropropane	78-87-5		U	25.0	5.00
1,3-Dichloropropane	142-28-9		U	25.0	5.00
2,2-Dichloropropane	594-20-7		U	25.0	6.25
cis-1,3-Dichloropropene	10061-01-5		U	25.0	6.25
trans-1,3-Dichloropropene	10061-02-6		U	25.0	12.5
1,1-Dichloropropene	563-58-6		U	25.0	6.25
Ethylbenzene	100-41-4		U	25.0	6.25
2-Hexanone	591-78-6		U	250	62.5
Hexachlorobutadiene	87-68-3		U	25.0	6.25
Isopropylbenzene	98-82-8		U	25.0	6.25
p-Isopropyltoluene	99-87-6		U	25.0	6.25
4-Methyl-2-pentanone	108-10-1		U	250	62.5
Methylene chloride	75-09-2	19.3	J	125	6.25
Naphthalene	91-20-3		U	25.0	5.00
n-Propylbenzene	103-65-1		U	25.0	3.13
Styrene	100-42-5		U	25.0	3.13
1,1,1,2-Tetrachloroethane	630-20-6		U	25.0	6.25
1,1,2,2-Tetrachloroethane	79-34-5		U	25.0	3.13
Tetrachloroethene	127-18-4		U	25.0	6.25
Toluene	108-88-3		U	25.0	6.25
1,2,3-Trichlorobenzene	87-61-6		U	25.0	3.75
1,2,4-Trichlorobenzene	120-82-1		U	25.0	5.00
1,1,1-Trichloroethane	71-55-6		U	25.0	6.25
1,1,2-Trichloroethane	79-00-5		U	25.0	6.25
Trichloroethene	79-01-6	2180		25.0	6.25
Trichlorofluoromethane	75-69-4		U	25.0	6.25

Report Number: **L09030497**Report Date : **April 1, 2009**

00087428

Sample Number: **L09030497-01**
 Client ID: **16WW35-031909**
 Matrix: **Water**
 Workgroup Number: **WG298271**
 Collect Date: **03/19/2009 09:10**
 Sample Tag: **DL02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **25**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/26/2009 13:16**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/26/2009 13:16**
 File ID: **10M71351**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	25.0	12.5
1,2,4-Trimethylbenzene	95-63-6		U	25.0	6.25
1,3,5-Trimethylbenzene	108-67-8		U	25.0	6.25
Vinyl acetate	108-05-4		U	250	62.5
Vinyl chloride	75-01-4	60.5		25.0	6.25
o-Xylene	95-47-6		U	25.0	6.25
m-,p-Xylene	136777-61-2		U	25.0	12.5
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	118	86	118		
1,2-Dichloroethane-d4	103	80	120		
Toluene-d8	101	88	110		
4-Bromofluorobenzene	90.9	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L09030497-01**
Client ID: **16WW35-031909**
Matrix: **Water**
Workgroup Number: **WG298376**
Collect Date: **03/19/2009 09:10**
Sample Tag: **DL03**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **10**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **03/27/2009 10:06**
Cal Date: **03/18/2009 15:23**
Run Date: **03/27/2009 10:06**
File ID: **10M71371**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	100	25.0
Benzene	71-43-2	1.93	J	10.0	1.25
Bromobenzene	108-86-1		U	10.0	1.25
Bromochloromethane	74-97-5		U	10.0	2.00
Bromodichloromethane	75-27-4		U	10.0	2.50
Bromoform	75-25-2		U	10.0	5.00
Bromomethane	74-83-9	6.50	J	10.0	5.00
2-Butanone	78-93-3		U	100	25.0
n-Butylbenzene	104-51-8		U	10.0	2.50
sec-Butylbenzene	135-98-8		U	10.0	2.50
tert-Butylbenzene	98-06-6		U	10.0	2.50
Carbon disulfide	75-15-0		U	10.0	5.00
Carbon tetrachloride	56-23-5		U	10.0	2.50
Chlorobenzene	108-90-7		U	10.0	1.25
Chlorodibromomethane	124-48-1		U	10.0	2.50
Chloroethane	75-00-3		U	10.0	5.00
2-Chloroethyl vinyl ether	110-75-8		U	100	20.0
Chloroform	67-66-3		U	10.0	1.25
Chloromethane	74-87-3		U	10.0	2.50
2-Chlorotoluene	95-49-8		U	10.0	1.25
4-Chlorotoluene	106-43-4		U	10.0	2.50
1,2-Dibromo-3-chloropropane	96-12-8		U	50.0	10.0
1,2-Dibromoethane	106-93-4		U	10.0	2.50
Dibromomethane	74-95-3		U	10.0	2.50
1,2-Dichlorobenzene	95-50-1		U	10.0	1.25
1,3-Dichlorobenzene	541-73-1		U	10.0	2.50
1,4-Dichlorobenzene	106-46-7		U	10.0	1.25
Dichlorodifluoromethane	75-71-8		U	10.0	2.50
1,1-Dichloroethane	75-34-3	2.23	J	10.0	1.25
1,2-Dichloroethane	107-06-2		U	10.0	2.50
1,1-Dichloroethene	75-35-4	19.9		10.0	5.00
cis-1,2-Dichloroethene	156-59-2	132		10.0	2.50
trans-1,2-Dichloroethene	156-60-5		U	10.0	2.50
1,2-Dichloropropane	78-87-5		U	10.0	2.00
1,3-Dichloropropane	142-28-9		U	10.0	2.00
2,2-Dichloropropane	594-20-7		U	10.0	2.50
cis-1,3-Dichloropropene	10061-01-5		U	10.0	2.50
trans-1,3-Dichloropropene	10061-02-6		U	10.0	5.00
1,1-Dichloropropene	563-58-6		U	10.0	2.50
Ethylbenzene	100-41-4		U	10.0	2.50
2-Hexanone	591-78-6		U	100	25.0
Hexachlorobutadiene	87-68-3	3.30	J	10.0	2.50
Isopropylbenzene	98-82-8		U	10.0	2.50
p-Isopropyltoluene	99-87-6		U	10.0	2.50
4-Methyl-2-pentanone	108-10-1		U	100	25.0
Methylene chloride	75-09-2		U	50.0	2.50
Naphthalene	91-20-3	4.95	J	10.0	2.00
n-Propylbenzene	103-65-1		U	10.0	1.25
Styrene	100-42-5	9.17	J	10.0	1.25
1,1,1,2-Tetrachloroethane	630-20-6		U	10.0	2.50
1,1,2,2-Tetrachloroethane	79-34-5		U	10.0	1.25
Tetrachloroethene	127-18-4		U	10.0	2.50
Toluene	108-88-3		U	10.0	2.50
1,2,3-Trichlorobenzene	87-61-6	2.65	J	10.0	1.50
1,2,4-Trichlorobenzene	120-82-1		U	10.0	2.00
1,1,1-Trichloroethane	71-55-6		U	10.0	2.50
1,1,2-Trichloroethane	79-00-5		U	10.0	2.50
Trichloroethene	79-01-6	2400	I	10.0	2.50
Trichlorofluoromethane	75-69-4		U	10.0	2.50

Report Number: **L09030497**Report Date : **April 1, 2009**

00087430

Sample Number: **L09030497-01**
 Client ID: **16WW35-031909**
 Matrix: **Water**
 Workgroup Number: **WG298376**
 Collect Date: **03/19/2009 09:10**
 Sample Tag: **DL03**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **10**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/27/2009 10:06**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/27/2009 10:06**
 File ID: **10M71371**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	10.0	5.00
1,2,4-Trimethylbenzene	95-63-6		U	10.0	2.50
1,3,5-Trimethylbenzene	108-67-8		U	10.0	2.50
Vinyl acetate	108-05-4		U	100	25.0
Vinyl chloride	75-01-4	53.6		10.0	2.50
o-Xylene	95-47-6		U	10.0	2.50
m-,p-Xylene	136777-61-2		U	10.0	5.00
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	108	86	118		
1,2-Dichloroethane-d4	97.4	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	90.2	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

I Semiquantitative result (out of instrument calibration range)

Sample Number: **L09030497-02**
 Client ID: **16WW24-031909**
 Matrix: **Water**
 Workgroup Number: **WG298271**
 Collect Date: **03/19/2009 11:30**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/26/2009 11:39**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/26/2009 11:39**
 File ID: **10M71348**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1	4.36	J	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6	1.43		1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

Report Number: **L09030497**Report Date : **April 1, 2009**

00087432

Sample Number: **L09030497-02**
 Client ID: **16WW24-031909**
 Matrix: **Water**
 Workgroup Number: **WG298271**
 Collect Date: **03/19/2009 11:30**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/26/2009 11:39**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/26/2009 11:39**
 File ID: **10M71348**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	118	86	118		
1,2-Dichloroethane-d4	104	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	93.1	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

2.1.1.2 QC Summary Data

Example 8260 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = [(Ax) (Cis)] / [(Ais) (Cx)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured:	3399156
Cis = Concentration of the specific internal standard (ug/mL)	25
Ais = Area of the characteristic ion of the specific internal standard	846471
Cx = Concentration of the compound in the standard being measured (ug/mL)	100

RF = Calculated Response Factor **1.0039**

2.0 Calculating the concentration (C) of a compound in water using the average RF: *

$$Cx = [(Ax) (Cis) (Vn)(D)] / [(Ais) (RF) (Vs)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Vs = Purge volume of sample (mL)	10
Vn = Nominal purge volume of sample (mL) (10.0 mL)	10
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

3.0 Calculating the concentration (C) of a compound in soil using the average RF: *

$$Cx = [(Ax) (Cis) (Wn)(D)] / [(Ais) (RF) (Ws)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Ws = Weight of sample purged (g)	5
Wn = Nominal purge weight (g) (5.0 g)	5
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

Dry weight correction:

Percent solids (PCT_S)	50
Cd = (Cx) (100)/PCT_S	254.4856

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, $y = mx + b$

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve = 0.213

b = intercept from curve = - 0.00642

Step 2: Calculate y from Quantitation Report

$$y = 86550/593147 = 0.1459$$

Step 3: Solve for x

$$x = (y - b)/m = [(0.1459 - (-0.00642))/0.213] = 0.7152$$

Step 4: Solve for analyte concentration Cx

$$Cx = Cis (x) = (25.0)(0.7152) = 17.88$$

Example Spreadsheet Calculation:

Slope from curve, m:	0.213
Intercept from curve, b:	-0.00642
Area of analyte, Ax:	86550
Area of Internal Standard, Ais:	593147
Concentration of IS, Cis	25.00
Response Ratio:	0.145917
Amount Ratio:	0.715195
Concentration:	17.87988
Units of Internal Standard:	ug/L

5.0 Concentration from Quadratic Regression**Step 1 - Retrieve Curve Data from Plot, $y = Ax^2 + Bx + C$**

Where:

$$Ax^2 + Bx + (C - y) = 0$$

A, B, C = constants from the ICAL quadratic regression

y = Response ratio = Area of analyte/Area of internal standard (IS)

x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

$$y = Ax/Ais$$

Step 3: Solve for x using the quadratic formula

$$Ax^2 + Bx + C - y = 0$$

$$x = \frac{b \pm \sqrt{(b^2 - 4a(c - y))}}{2a} \quad (\text{Two possible solutions})$$

Step 4: Solve for analyte concentration Cx

$$Cx = (Cis)(\text{Amount ratio})$$

Example Spreadsheet Calculation:

Value of A from plot:	-0.00629
Value of B from plot:	0.511
Value of C from plot:	-0.0276
Area of unknown from quantitation report:	293821
Area of IS from quantitation report:	784848
Response ratio, y:	0.374367
C - y:	-0.40197
Root 1 - Computed amount ratio, X1:	80.44567
Root 2 - Computed amount ratio, X2:	0.794396 use this solution
Concentration of IS, Cis:	25.00
Concentration of analyte, Cx:	19.86 ug/L

Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031809
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28031

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297559

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71171	SYSTEM BLANK	NA	1	1		03/18/09 07:43
2	10M71172	SYSTEM BLANK	NA	1	1		03/18/09 08:17
3	10M71173	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 08:47
4	10M71174	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 09:00
5	10M71175	WG297559-02 0.3ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:26
6	10M71176	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:58
7	10M71177	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 10:31
8	10M71178	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:03
9	10M71179	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:36
10	10M71180	WG297559-05 2ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:08
11	10M71181	WG297559-06 5ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:40
12	10M71182	WG297559-07 20ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:13
13	10M71183	WG297559-08 50ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:45
14	10M71184	WG297559-09 100ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:17
15	10M71185	WG297559-10 200ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:50
16	10M71186	WG297559-11 300ug/L STD 8260	NA	1	1	STD31848	03/18/09 15:23
17	10M71187	SYSTEM BLANK	NA	1	1		03/18/09 15:55
18	10M71188	SYSTEM BLANK	NA	1	1		03/18/09 16:27
19	10M71189	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/18/09 16:58
20	10M71190	SYSTEM BLANK	NA	1	1		03/18/09 17:30

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X			
File ID: 10M71173				
Tune failed. DNR.				
6	X			
File ID: 10M71176				
No secondary for 123-TCB. DNR.				
9	X			
File ID: 10M71179				
Idomethane didn't show up at all. DNR.				

Approved:



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71192	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 12:01
2	10M71193	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 12:27
3	10M71194	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 13:04
4	10M71195	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 13:36
5	10M71196	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 14:04
6	10M71197	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 14:28
7	10M71198	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 15:01
8	10M71199	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 15:25
9	10M71200	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 15:57
10	10M71201	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 16:33
11	10M71202	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/19/09 17:05
12	10M71203	WG297551-02 20ug/L LCS STD 8260	NA	1	1	STD31819	03/19/09 17:38
13	10M71204	L09030379-13 A 826-SPE	<2	1	1		03/19/09 18:10
14	10M71205	L09030379-01 A 826-SPE	4	1	1		03/19/09 18:42
15	10M71206	L09030379-02 A 826-SPE	5	1	1		03/19/09 19:15
16	10M71207	L09030379-03 A 826-SPE	<2	1	1		03/19/09 19:47
17	10M71208	L09030379-04 A 826-SPE	5	1	1		03/19/09 20:19
18	10M71209	L09030379-05 A 826-SPE	<2	1	1		03/19/09 20:52
19	10M71210	L09030379-06 A 826-SPE	4	1	1		03/19/09 21:24
20	10M71211	L09030379-07 A 826-SPE	5	1	1		03/19/09 21:56
21	10M71212	L09030379-08 A 826-SPE	4	1	1		03/19/09 22:29
22	10M71213	L09030379-09 A MS 826-SPE	3	1	1	STD31819	03/19/09 23:01
23	10M71214	L09030379-10 A MSD 826-SPE	3	1	1	STD31819	03/19/09 23:33
24	10M71215	L09030379-11 A 826-SPE	4	1	1		03/20/09 00:05
25	10M71216	L09030379-12 A 2X 826-SPE	5	1	2		03/20/09 00:38
26	10M71217	L09030379-14 A 826-SPE	7	1	1		03/20/09 01:10
27	10M71218	L09030379-15 A 826-SPE	7	1	1		03/20/09 01:43
28	10M71219	L09030379-16 A 826-SPE	<2	1	1		03/20/09 02:15
29	10M71220	L09030379-17 A 826-SPE	7	1	1		03/20/09 02:48
30	10M71221	SYSTEM BLANK	NA	1	1		03/20/09 03:21
31	10M71222	SYSTEM BLANK	NA	1	1		03/20/09 03:53

Comments

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Over Linear Range	VC
File ID: 10M71193				
VC was low. DNR.				
3	X		Over Linear Range	
File ID: 10M71194				
VC was low. DNR.				
4	X	1	Carry-over contamination	
File ID: 10M71195				
DNR.				
6	X		Over Linear Range	
File ID: 10M71197				
VC was low. DNR.				
9	X	1	Carry-over contamination	
File ID: 10M71200				
DNR.				
14	X	5	Over Calibration Range	2-BUT
File ID: 10M71205				
15	X	10	Over Calibration Range	2-BUT
File ID: 10M71206				
16	X	10	Over Calibration Range	2-BUT
File ID: 10M71207				
17	X	50	Over Calibration Range	2-BUT
File ID: 10M71208				
18	X	1	Carry-over contamination	
File ID: 10M71209				
DNR.				
19	X	10	Over Calibration Range	2-BUT
File ID: 10M71210				
20	X	10	Over Calibration Range	2-BUT
File ID: 10M71211				

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21	X	10	Over Calibration Range	2-BUT
File ID: 10M71212				
24	X	5	Over Calibration Range	2-BUT
File ID: 10M71215				
25	X	10	Over Calibration Range	2-BUT
File ID: 10M71216				
26	X	10	Over Calibration Range	2-BUT
File ID: 10M71217				
27	X	1	Carry-over contamination	
File ID: 10M71218				
DNR.				
28	X	1	Surrogate standard failure	
File ID: 10M71219				
DNR.				
29	X	10	Over Calibration Range	2-BUT
File ID: 10M71220				

Approved: March 23, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 032609
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11
 Method: 624 SOP: MSV10 Rev: 7
 Maintenance Log ID: 28134

Internal Standard: STD31969 Surrogate Standard: STD31945
 CCV: STD31950 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298271

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71340	WG298268-01 50ng BFB STD 8260	NA	1	1	STD31709	03/26/09 07:27
2	10M71341	WG298268-02 50ug/L CCV STD 8260	NA	1	1	STD31950	03/26/09 07:51
3	10M71342	WG298271-01 VBLK0326 BLANK STD 826	NA	1	1		03/26/09 08:24
4	10M71343	WG298271-01 VBLK0326 BLANK STD 826	NA	1	1		03/26/09 08:56
5	10M71344	WG298271-02 20ug/L LCS STD 8260	NA	1	1	STD31951	03/26/09 09:29
6	10M71345	WG298271-03 20ug/L LCSDUP STD 8260	NA	1	1	STD31951	03/26/09 10:01
7	10M71346	WG298271-04 FBLK 10X STD 8260	NA	1	10		03/26/09 10:34
8	10M71347	L09030450-11 A 826-SPE1	<2	1	1		03/26/09 11:06
9	10M71348	L09030497-02 B 826-LOW	<2	1	1		03/26/09 11:39
10	10M71349	L09030465-02 B 5X 826-SPE 00	<2	1	5		03/26/09 12:11
11	10M71350	L09030465-06 B 20X 826-SPE 00	<2	1	20		03/26/09 12:43
12	10M71351	L09030497-01 B 25X 826-LOW	7	1	25		03/26/09 13:16
13	10M71352	L09030450-01 A 826-SPE1	<2	1	1		03/26/09 13:49
14	10M71353	L09030450-03 A 826-SPE1	<2	1	1		03/26/09 14:21
15	10M71354	L09030450-07 A 826-SPE1	<2	1	1		03/26/09 14:53
16	10M71355	L09030450-09 A 826-SPE1	<2	1	1		03/26/09 15:26
17	10M71356	L09030450-05 A 10X 826-SPE1	<2	1	10		03/26/09 15:58
18	10M71357	L09030565-01 A 826-SPE	<2	1	1		03/26/09 16:30
19	10M71358	L09030565-02 A 826-SPE	7	1	1		03/26/09 17:03
20	10M71359	L09030565-04 A 826-SPE	<2	1	1		03/26/09 17:35
21	10M71360	L09030565-06 A 826-SPE	<2	1	1		03/26/09 18:08
22	10M71361	SYSTEM BLANK	NA	1	1		03/26/09 18:40
23	10M71362	WG298271-05 624 BLANK	NA	1	1		03/26/09 19:13
24	10M71363	L09030564-01 A 624-SPE	<2	2	1		03/26/09 19:45
25	10M71364	L09030554-01 A 624-SPE	7	2	1		03/26/09 20:17

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X	1	Carry-over contamination	
File ID: 10M71342				
DNR.				
12	X	10	Analyzed too dilute	
File ID: 10M71351				

Approved: March 27, 2009

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[Signature]



Microbac Laboratories Inc.

Maintenance Log ID: 28134

Internal Standard: STD31969 Surrogate Standard: STD31945

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
Use as a D1.				
16	X	1	Surrogate standard failure	
File ID:10M71355				

Approved: March 27, 2009

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Francis Pickens



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 032709
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28136

Internal Standard: STD31969 Surrogate Standard: STD31945
 CCV: STD31950 LCS: STD31951 MS/MSD: STD31951
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298376

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71366	WG298375-01 50ng BFB STD 8260	NA	1	1	STD31709	03/27/09 07:27
2	10M71367	WG298375-02 50ug/L CCV STD 8260	NA	1	1	STD31950	03/27/09 07:51
3	10M71368	WG298376-01 VBLK0327 BLANK STD 826	NA	1	1		03/27/09 08:29
4	10M71369	WG298376-01 VBLK0327 BLANK STD 826	NA	1	1		03/27/09 09:01
5	10M71370	WG298376-02 20ug/L LCS STD 8260	NA	1	1	STD31951	03/27/09 09:34
6	10M71371	L09030497-01 C 10X 826-LOW 00	4	1	10		03/27/09 10:06
7	10M71372	L09030450-09 B 826-SPE1 A1	<2	1	1		03/27/09 10:39
8	10M71373	L09030577-03 A 826-LOW	<2	1	1		03/27/09 11:11
9	10M71374	L09030577-04 A 826-LOW	<2	1	1		03/27/09 11:43
10	10M71375	L09030577-05 A 826-LOW	<2	1	1		03/27/09 12:16
11	10M71376	L09030577-06 A MS 826-LOW	<2	1	1	STD31951	03/27/09 12:49
12	10M71377	L09030577-07 A MSD 826-LOW	<2	1	1	STD31951	03/27/09 13:21
13	10M71378	L09030577-08 A 826-LOW	<2	1	1		03/27/09 13:54
14	10M71379	L09030577-09 A 826-LOW	<2	1	1		03/27/09 14:26
15	10M71380	L09030577-11 A 826-LOW	<2	1	1		03/27/09 14:59
16	10M71381	L09030577-12 A 826-LOW	<2	1	1		03/27/09 15:30
17	10M71382	L09030577-15 A 826-LOW	<2	1	1		03/27/09 16:03
18	10M71383	L09030577-16 A 826-LOW	<2	1	1		03/27/09 16:35
19	10M71384	L09030577-20 A 826-LOW	<2	1	1		03/27/09 17:07
20	10M71385	L09030577-21 A 826-LOW	<2	1	1		03/27/09 17:40
21	10M71386	L09030577-10 A 2.5X 826-LOW	<2	1	2.5		03/27/09 18:12
22	10M71387	L09030577-13 A 2.5X 826-LOW	<2	1	2.5		03/27/09 18:44
23	10M71388	L09030577-14 A 2.5X 826-LOW	<2	1	2.5		03/27/09 19:17
24	10M71389	SYSTEM BLANK	NA	1	1		03/27/09 19:49
25	10M71390	SYSTEM BLANK	NA	1	1		03/27/09 20:21
26	10M71391	L09030295-01 A 826-REF-BLK	<2	1	1		03/27/09 20:53
27	10M71392	L09030295-02 A 826-REF-BLK	<2	1	1		03/27/09 21:26
28	10M71393	L09030295-03 A 826-REF-BLK	<2	1	1		03/27/09 21:59
29	10M71394	L09030295-04 A 826-REF-BLK	<2	1	1		03/27/09 22:31
30	10M71395	L09030295-05 A 826-REF-BLK	<2	1	1		03/27/09 23:04
31	10M71396	TEST VIAL 3/27/09	NA	1	1		03/27/09 23:36

Comments

Approved: March 31, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 032709
Analyst1: TMB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 12
Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28136

Internal Standard: STD31969 Surrogate Standard: STD31945
CCV: STD31950 LCS: STD31951 MS/MSD: STD31951
Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG298376

Comments: Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X	1	Carry-over contamination	
File ID: 10M71368				
DNR.				

Approved: March 31, 2009

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Data Checklist

Date: 18-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27121

Analytical Workgroups: WG297559

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the reasonableness of the results	

Primary Reviewer:
19-MAR-2009

Tiffany Bailey

Secondary Reviewer:

Microbac Laboratories Inc.

Data Checklist

Date: 19-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27161

Analytical Workgroups: WG297551

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
20-MAR-2009

Tiffany Bailey

Secondary Reviewer:
23-MAR-2009

MDA

Microbac Laboratories Inc.

Data Checklist

Date: 26-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27265

Analytical Workgroups: WG298271

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	FJB
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the reasonableness of the results	

Primary Reviewer:
27-MAR-2009

Tiffany Bailey

Secondary Reviewer:
27-MAR-2009

Frank J. Bailey

Microbac Laboratories Inc.

Data Checklist

Date: 27-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27267

Analytical Workgroups: WG298376

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
27-MAR-2009

Tiffany Bailey

Secondary Reviewer:
31-MAR-2009

Michael A. Bailey

Analytical Method: 8260B

AAB#: WG298271

Login Number: L09030497

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW24-031909	03/19/09	03/24/09	03/26/09	14	7.01	03/26/09	14	7.01	
16WW35-031909	03/19/09	03/24/09	03/26/09	14	7.17	03/26/09	14	7.17	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Analytical Method: 8260B

AAB#: WG298376

Login Number: L09030497

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW35-031909	03/19/09	03/24/09	03/27/09	14	8.04	03/27/09	14	8.04	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Login Number: L09030497
Instrument Id: HPMS10
Workgroup (AAB#): WG298271

Method: 8260
CAL ID: HPMS10 - 18-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030497-01	25.0	DL02	103	118	90.9	101
L09030497-02	1.00	01	104	118	93.1	102
WG298271-01	1.00	01	103	<u>119</u>	89.7	101
WG298271-02	1.00	01	95.5	95.1	101	96.8
WG298271-03	1.00	01	97.2	99.0	100	95.9
WG298271-04	10.0	DL01	98.7	118	90.7	99.7
WG298271-05	1.00	01	106	<u>119</u>	89.8	103

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

Login Number: L09030497
Instrument Id: HPMS10
Workgroup (AAB#): WG298376

Method: 8260
CAL ID: HPMS10 - 18-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030497-01	10.0	DL03	97.4	108	90.2	102
WG298376-01	1.00	01	103	113	91.1	103
WG298376-02	1.00	01	95.3	93.4	101	97.4

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

METHOD BLANK SUMMARY

Login Number: L09030497
Blank File ID: 10M71343
Prep Date: 03/26/09 08:56
Analyzed Date: 03/26/09 08:56
Analyst: TMB

Work Group: WG298271
Blank Sample ID: WG298271-01
Instrument ID: HPMS10
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298271-02	10M71344	03/26/09 09:29	01
LCS2	WG298271-03	10M71345	03/26/09 10:01	01
FBLK	WG298271-04	10M71346	03/26/09 10:34	DL01
16WW24-031909	L09030497-02	10M71348	03/26/09 11:39	01
16WW35-031909	L09030497-01	10M71351	03/26/09 13:16	DL02

Report Name: BLANK_SUMMARY
PDF File ID: 1352281
Report generated 03/27/2009 12:52



METHOD BLANK SUMMARY

Login Number: L09030497
Blank File ID: 10M71369
Prep Date: 03/27/09 09:01
Analyzed Date: 03/27/09 09:01
Analyst: TMB

Work Group: WG298376
Blank Sample ID: WG298376-01
Instrument ID: HPMS10
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298376-02	10M71370	03/27/09 09:34	01
16WW35-031909	L09030497-01	10M71371	03/27/09 10:06	DL03

Report Name: BLANK_SUMMARY
PDF File ID: 1352281
Report generated 03/27/2009 12:52



Login Number: L09030497 Prep Date: 03/26/09 08:56 Sample ID: WG298271-01
Instrument ID: HPMS10 Run Date: 03/26/09 08:56 Prep Method: 5030B
File ID: 10M71343 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298271 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1352303

27-MAR-2009 12:52



Login Number: L09030497 Prep Date: 03/26/09 08:56 Sample ID: WG298271-01
Instrument ID: HPMS10 Run Date: 03/26/09 08:56 Prep Method: 5030B
File ID: 10M71343 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298271 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	119	86 - 118	FAIL
1,2-Dichloroethane-d4	103	80 - 120	PASS
Toluene-d8	101	88 - 110	PASS
4-Bromofluorobenzene	89.7	86 - 115	PASS

SDL Method Detection Limit

PQL Reporting/Practical Quantitation Limit

ND Analyte Not detected at or above reporting limit

* |Analyte concentration| > RL

Report Name: BLANK

PDF ID: 1352303

27-MAR-2009 12:52



Login Number: L09030497 Prep Date: 03/27/09 09:01 Sample ID: WG298376-01
Instrument ID: HPMS10 Run Date: 03/27/09 09:01 Prep Method: 5030B
File ID: 10M71369 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298376 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1352303

27-MAR-2009 12:52



Login Number: L09030497 Prep Date: 03/27/09 09:01 Sample ID: WG298376-01
Instrument ID: HPMS10 Run Date: 03/27/09 09:01 Prep Method: 5030B
File ID: 10M71369 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298376 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	113	86 - 118	PASS
1,2-Dichloroethane-d4	103	80 - 120	PASS
Toluene-d8	103	88 - 110	PASS
4-Bromofluorobenzene	91.1	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1352303
27-MAR-2009 12:52



Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298376-02
Instrument ID: HPMS10 Run Time: 09:34 Prep Method: 5030B
File ID: 10M71370 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298376 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD31951 Cal ID: HPMS10 - 18-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits			Q
Acetone	20.0	24.8	124	40	-	142	
Benzene	20.0	19.0	94.9	80	-	121	
Bromobenzene	20.0	22.6	113	80	-	120	
Bromochloromethane	20.0	19.6	98.2	65	-	130	
Bromodichloromethane	20.0	20.9	105	80	-	131	
Bromoform	20.0	22.6	113	70	-	130	
Bromomethane	20.0	17.8	88.8	30	-	145	
2-Butanone	20.0	34.5	173	30	-	150	*
n-Butylbenzene	20.0	22.1	111	80	-	131	
sec-Butylbenzene	20.0	21.2	106	80	-	127	
tert-Butylbenzene	20.0	17.8	88.8	80	-	126	
Carbon disulfide	20.0	18.2	91.0	58	-	138	
Carbon tetrachloride	20.0	19.1	95.4	65	-	140	
Chlorobenzene	20.0	20.5	102	80	-	120	
Chlorodibromomethane	20.0	19.7	98.7	60	-	135	
Chloroethane	20.0	16.9	84.5	60	-	135	
2-Chloroethyl vinyl ether	20.0	20.9	104	58	-	151	
Chloroform	20.0	18.8	94.1	80	-	125	
Chloromethane	20.0	15.7	78.3	40	-	125	
2-Chlorotoluene	20.0	21.0	105	80	-	127	
4-Chlorotoluene	20.0	19.6	98.0	80	-	126	
1,2-Dibromo-3-chloropropane	20.0	22.8	114	50	-	130	
1,2-Dibromoethane	20.0	19.9	99.7	80	-	125	
Dibromomethane	20.0	21.1	105	75	-	125	
1,2-Dichlorobenzene	20.0	21.2	106	80	-	125	
1,3-Dichlorobenzene	20.0	21.1	106	80	-	120	
1,4-Dichlorobenzene	20.0	19.4	97.1	80	-	120	
Dichlorodifluoromethane	20.0	16.8	84.2	50	-	133	
1,1-Dichloroethane	20.0	18.6	93.2	80	-	125	
1,2-Dichloroethane	20.0	20.1	100	80	-	129	
1,1-Dichloroethene	20.0	18.6	92.8	80	-	132	
cis-1,2-Dichloroethene	20.0	19.6	98.0	70	-	125	
trans-1,2-Dichloroethene	20.0	19.0	95.2	80	-	127	
1,2-Dichloropropane	20.0	19.4	97.2	80	-	120	
1,3-Dichloropropane	20.0	19.7	98.4	80	-	120	
2,2-Dichloropropane	20.0	18.3	91.3	80	-	133	
cis-1,3-Dichloropropene	20.0	18.4	92.0	70	-	130	
trans-1,3-Dichloropropene	20.0	16.3	81.6	80	-	130	
1,1-Dichloropropene	20.0	19.1	95.3	75	-	130	
Ethylbenzene	20.0	21.0	105	80	-	122	
2-Hexanone	20.0	26.8	134	55	-	130	*

LCS - Modified 03/06/2008
PDF File ID: 1352277
Report generated: 03/27/2009 12:52



Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298376-02
Instrument ID: HPMS10 Run Time: 09:34 Prep Method: 5030B
File ID: 10M71370 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298376 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD31951 Cal ID: HPMS10 - 18-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits			Q
Hexachlorobutadiene	20.0	21.2	106	72	-	132	
Isopropylbenzene	20.0	14.5	72.6	80	-	122	*
p-Isopropyltoluene	20.0	20.6	103	80	-	122	
4-Methyl-2-pentanone	20.0	24.8	124	64	-	140	
Methylene chloride	20.0	19.0	95.1	80	-	123	
Naphthalene	20.0	25.6	128	59	-	149	
n-Propylbenzene	20.0	18.8	94.1	80	-	129	
Styrene	20.0	19.1	95.5	80	-	123	
1,1,1,2-Tetrachloroethane	20.0	18.2	90.9	80	-	130	
1,1,2,2-Tetrachloroethane	20.0	23.1	116	79	-	125	
Tetrachloroethene	20.0	19.9	99.3	80	-	124	
Toluene	20.0	20.7	103	80	-	124	
1,2,3-Trichlorobenzene	20.0	21.0	105	55	-	140	
1,2,4-Trichlorobenzene	20.0	25.7	129	65	-	135	
1,1,1-Trichloroethane	20.0	19.4	97.2	80	-	134	
1,1,2-Trichloroethane	20.0	20.7	104	80	-	125	
Trichloroethene	20.0	19.6	97.8	80	-	122	
Trichlorofluoromethane	20.0	17.9	89.5	62	-	151	
1,2,3-Trichloropropane	20.0	23.8	119	75	-	125	
1,2,4-Trimethylbenzene	20.0	23.3	117	80	-	125	
1,3,5-Trimethylbenzene	20.0	20.7	103	80	-	127	
Vinyl acetate	20.0	20.7	103	10	-	150	
Vinyl chloride	20.0	17.3	86.4	65	-	140	
o-Xylene	20.0	19.4	96.8	80	-	122	
m-,p-Xylene	40.0	37.6	93.9	80	-	122	

Surrogates	% Recovery	Surrogate Limits			Qualifier
Dibromofluoromethane	93.4	86	-	118	PASS
1,2-Dichloroethane-d4	95.3	80	-	120	PASS
Toluene-d8	97.4	88	-	110	PASS
4-Bromofluorobenzene	101	86	-	115	PASS

* FAILS %REC LIMIT

Login Number: L09030497 Analyst: TMB Prep Method: 5030B
 Instrument ID: HPMS10 Matrix: Water Method: 8260B
 Workgroup (AAB#): WG298271 Units: ug/L
 QC Key: STD Lot #: STD31951

Sample ID: WG298271-02 LCS File ID: 10M71344 Run Date: 03/26/2009 09:29
 Sample ID: WG298271-03 LCS2 File ID: 10M71345 Run Date: 03/26/2009 10:01

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	26.9	135	20.0	27.0	135	0.275	40 - 142	20	
Benzene	20.0	20.0	100	20.0	20.3	101	1.25	80 - 121	20	
Bromobenzene	20.0	23.3	117	20.0	22.8	114	2.15	80 - 120	20	
Bromochloromethane	20.0	20.5	103	20.0	21.0	105	2.45	65 - 130	20	
Bromodichloromethane	20.0	21.9	110	20.0	22.5	113	2.87	80 - 131	20	
Bromoform	20.0	23.4	117	20.0	22.6	113	3.55	70 - 130	20	
Bromomethane	20.0	18.4	91.9	20.0	19.1	95.7	4.07	30 - 145	20	
2-Butanone	20.0	36.0	180	20.0	36.0	180	0.121	30 - 150	20	*
n-Butylbenzene	20.0	23.0	115	20.0	23.9	120	4.00	80 - 131	20	
sec-Butylbenzene	20.0	23.1	115	20.0	23.3	117	1.10	80 - 127	20	
tert-Butylbenzene	20.0	19.6	98.2	20.0	19.4	96.9	1.38	80 - 126	20	
Carbon disulfide	20.0	19.2	96.2	20.0	20.1	100	4.36	58 - 138	20	
Carbon tetrachloride	20.0	20.5	102	20.0	21.1	105	2.98	65 - 140	20	
Chlorobenzene	20.0	20.7	104	20.0	21.4	107	3.00	80 - 120	20	
Chlorodibromomethane	20.0	21.5	107	20.0	21.6	108	0.655	60 - 135	20	
Chloroethane	20.0	17.0	85.1	20.0	19.2	95.9	11.9	60 - 135	20	
2-Chloroethyl vinyl ether	20.0	20.3	102	20.0	20.7	104	2.05	58 - 151	20	
Chloroform	20.0	19.6	97.8	20.0	20.0	100	2.27	80 - 125	20	
Chloromethane	20.0	16.0	80.1	20.0	17.8	88.8	10.2	40 - 125	20	
2-Chlorotoluene	20.0	22.3	111	20.0	22.2	111	0.495	80 - 127	20	
4-Chlorotoluene	20.0	20.6	103	20.0	21.3	107	3.30	80 - 126	20	
1,2-Dibromo-3-chloropropane	20.0	22.4	112	20.0	22.5	112	0.251	50 - 130	20	
1,2-Dibromoethane	20.0	21.7	108	20.0	21.7	108	0.0911	80 - 125	20	
Dibromomethane	20.0	22.0	110	20.0	22.5	112	2.31	75 - 125	20	
1,2-Dichlorobenzene	20.0	21.7	108	20.0	21.9	109	0.788	80 - 125	20	
1,3-Dichlorobenzene	20.0	21.6	108	20.0	22.7	114	4.95	80 - 120	20	
1,4-Dichlorobenzene	20.0	19.8	98.9	20.0	20.3	102	2.85	80 - 120	20	
Dichlorodifluoromethane	20.0	18.2	91.2	20.0	19.3	96.7	5.92	50 - 133	20	
1,1-Dichloroethane	20.0	19.7	98.5	20.0	20.5	103	4.06	80 - 125	20	
1,2-Dichloroethane	20.0	21.1	106	20.0	21.2	106	0.252	80 - 129	20	
1,1-Dichloroethene	20.0	19.5	97.6	20.0	20.1	101	2.90	80 - 132	20	
cis-1,2-Dichloroethene	20.0	20.7	103	20.0	21.3	107	3.08	70 - 125	20	
trans-1,2-Dichloroethene	20.0	19.8	98.9	20.0	20.2	101	2.19	80 - 127	20	
1,2-Dichloropropane	20.0	20.2	101	20.0	20.7	103	2.13	80 - 120	20	
1,3-Dichloropropane	20.0	21.2	106	20.0	21.3	106	0.274	80 - 120	20	
2,2-Dichloropropane	20.0	19.5	97.6	20.0	19.9	99.7	2.11	80 - 133	20	
cis-1,3-Dichloropropene	20.0	20.3	101	20.0	20.8	104	2.36	70 - 130	20	
trans-1,3-Dichloropropene	20.0	18.0	89.8	20.0	18.5	92.5	2.99	80 - 130	20	
1,1-Dichloropropene	20.0	20.0	99.9	20.0	20.6	103	3.11	75 - 130	20	
Ethylbenzene	20.0	22.6	113	20.0	22.7	113	0.269	80 - 122	20	

LCS_LCS2 - Modified 03/06/2008
 PDF File ID: 1351040
 Report generated: 03/27/2009 12:52



Login Number: L09030497 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298271 Units: ug/L
QC Key: STD Lot #: STD31951

Sample ID: WG298271-02 LCS File ID: 10M71344 Run Date: 03/26/2009 09:29
Sample ID: WG298271-03 LCS2 File ID: 10M71345 Run Date: 03/26/2009 10:01

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2-Hexanone	20.0	26.7	134	20.0	27.1	136	1.52	55 - 130	20	*
Hexachlorobutadiene	20.0	24.4	122	20.0	25.9	129	5.86	72 - 132	20	
Isopropylbenzene	20.0	17.2	86.0	20.0	17.4	86.9	1.04	80 - 122	20	
p-Isopropyltoluene	20.0	21.5	108	20.0	22.0	110	2.36	80 - 122	20	
4-Methyl-2-pentanone	20.0	23.7	118	20.0	23.3	117	1.54	64 - 140	20	
Methylene chloride	20.0	19.9	99.5	20.0	20.9	105	4.99	80 - 123	20	
Naphthalene	20.0	25.5	128	20.0	25.4	127	0.624	59 - 149	20	
n-Propylbenzene	20.0	20.3	102	20.0	21.1	105	3.69	80 - 129	20	
Styrene	20.0	20.0	100	20.0	21.1	105	5.01	80 - 123	20	
1,1,1,2-Tetrachloroethane	20.0	19.2	95.8	20.0	19.2	96.2	0.415	80 - 130	20	
1,1,2,2-Tetrachloroethane	20.0	22.9	114	20.0	21.9	110	4.16	79 - 125	20	
Tetrachloroethene	20.0	20.3	102	20.0	21.2	106	4.22	80 - 124	20	
Toluene	20.0	21.3	107	20.0	21.7	108	1.67	80 - 124	20	
1,2,3-Trichlorobenzene	20.0	22.0	110	20.0	22.3	111	1.33	55 - 140	20	
1,2,4-Trichlorobenzene	20.0	26.8	134	20.0	26.9	135	0.467	65 - 135	20	
1,1,1-Trichloroethane	20.0	20.1	100	20.0	20.6	103	2.66	80 - 134	20	
1,1,2-Trichloroethane	20.0	21.7	108	20.0	22.1	110	1.87	80 - 125	20	
Trichloroethene	20.0	20.4	102	20.0	21.2	106	3.77	80 - 122	20	
Trichlorofluoromethane	20.0	18.7	93.5	20.0	19.2	95.9	2.54	62 - 151	20	
1,2,3-Trichloropropane	20.0	23.2	116	20.0	22.6	113	2.53	75 - 125	20	
1,2,4-Trimethylbenzene	20.0	24.0	120	20.0	24.2	121	0.966	80 - 125	20	
1,3,5-Trimethylbenzene	20.0	21.9	109	20.0	22.1	110	0.824	80 - 127	20	
Vinyl acetate	20.0	26.6	133	20.0	27.1	136	1.75	10 - 150	20	
Vinyl chloride	20.0	18.0	89.8	20.0	17.8	89.2	0.693	65 - 140	20	
o-Xylene	20.0	20.8	104	20.0	21.0	105	0.757	80 - 122	20	
m-, p-Xylene	40.0	41.3	103	40.0	42.4	106	2.65	80 - 122	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	95.5	97.2	80 - 120	PASS
Dibromofluoromethane	95.1	99.0	86 - 118	PASS
4-Bromofluorobenzene	101	100	86 - 115	PASS
Toluene-d8	96.8	95.9	88 - 110	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1351040
Report generated: 03/27/2009 12:52



BFB

Login Number: L09030497
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297559

Tune ID: WG297559-01
Run Date: 03/18/2009
Run Time: 09:00
File ID: 10M71174

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.0	5747	PASS
75.0	95.0	30.0	60.0	47.9	10994	PASS
95.0	95.0	100	100	100	22949	PASS
96.0	95.0	5.00	9.00	6.91	1585	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	92.1	21128	PASS
175	174	5.00	9.00	7.12	1504	PASS
176	174	95.0	101	97.0	20489	PASS
177	176	5.00	9.00	7.42	1521	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-02	STD	01	03/18/2009 09:26	
WG297559-04	STD	01	03/18/2009 10:31	
WG297559-03	STD	01	03/18/2009 11:03	
WG297559-05	STD	01	03/18/2009 12:08	
WG297559-06	STD	01	03/18/2009 12:40	
WG297559-07	STD	01	03/18/2009 13:13	
WG297559-08	STD-CCV	01	03/18/2009 13:45	
WG297559-09	STD	01	03/18/2009 14:17	
WG297559-10	STD	01	03/18/2009 14:50	
WG297559-11	STD	01	03/18/2009 15:23	
WG297559-12	SSCV	01	03/18/2009 16:58	

* Sample past 12 hour tune limit

BFB

Login Number: L09030497
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297549

Tune ID: WG297549-01
Run Date: 03/19/2009
Run Time: 15:01
File ID: 10M71198

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	23.1	1728	PASS
75.0	95.0	30.0	60.0	50.1	3742	PASS
95.0	95.0	100	100	100	7467	PASS
96.0	95.0	5.00	9.00	6.19	462	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	91.9	6861	PASS
175	174	5.00	9.00	8.09	555	PASS
176	174	95.0	101	96.5	6621	PASS
177	176	5.00	9.00	7.34	486	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-12	SSCV	02	03/19/2009 17:05	

* Sample past 12 hour tune limit

BFB

Login Number: L09030497
Instrument: HPMS10
Analyst: TMB
Workgroup: WG298268

Tune ID: WG298268-01
Run Date: 03/26/2009
Run Time: 07:27
File ID: 10M71340

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	26.2	9060	PASS
75.0	95.0	30.0	60.0	50.0	17300	PASS
95.0	95.0	100	100	100	34625	PASS
96.0	95.0	5.00	9.00	6.84	2368	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	82.6	28611	PASS
175	174	5.00	9.00	7.61	2178	PASS
176	174	95.0	101	96.2	27514	PASS
177	176	5.00	9.00	7.17	1973	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298268-02	CCV	01	03/26/2009 07:51	
WG298271-01	BLANK	01	03/26/2009 08:56	
WG298271-02	LCS	01	03/26/2009 09:29	
WG298271-03	LCS2	01	03/26/2009 10:01	
WG298271-04	FBLK	DL01	03/26/2009 10:34	
L09030497-02	16WW24-031909	01	03/26/2009 11:39	
L09030497-01	16WW35-031909	DL02	03/26/2009 13:16	
WG298271-05	BLANK2	01	03/26/2009 19:13	

* Sample past 12 hour tune limit

BFB

Login Number: L09030497
Instrument: HPMS10
Analyst: TMB
Workgroup: WG298375

Tune ID: WG298375-01
Run Date: 03/27/2009
Run Time: 07:27
File ID: 10M71366

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	26.9	9551	PASS
75.0	95.0	30.0	60.0	47.5	16847	PASS
95.0	95.0	100	100	100	35470	PASS
96.0	95.0	5.00	9.00	7.09	2514	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	81.0	28715	PASS
175	174	5.00	9.00	8.25	2370	PASS
176	174	95.0	101	97.1	27893	PASS
177	176	5.00	9.00	6.82	1901	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298375-02	CCV	01	03/27/2009 07:51	
WG298376-01	BLANK	01	03/27/2009 09:01	
WG298376-02	LCS	01	03/27/2009 09:34	
L09030497-01	16WW35-031909	DL03	03/27/2009 10:06	

* Sample past 12 hour tune limit

Login Number: L09030497
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.1883	3.35		
1,2-Dichloropropane	CCC	0.2703	4.94		
Chloroform	CCC	0.3958	7.78		
Ethylbenzene	CCC	0.3605	14.1		
Toluene	CCC	1.132	7.54		
Vinyl Chloride	CCC	0.2730	19.8		0.99900
1,1,2,2-Tetrachloroethane	SPCC	0.7145	16.4		0.99900
1,1-Dichloroethane	SPCC	0.4721	6.28		
Bromoform	SPCC	0.1797	11.2		
Chlorobenzene	SPCC	0.7377	4.82		
Chloromethane	SPCC	0.4126	5.93		
1,1,1,2-Tetrachloroethane		0.3618	13.8		
1,1,1-Trichloroethane		0.3354	4.49		
1,1,2-Trichloroethane		0.2312	14.7		
1,1-Dichloropropene		0.2958	5.90		
1,2,3-Trichlorobenzene		0.8396	16.0		1.00000
1,2,3-Trichloropropane		0.1970	19.8		0.99900
1,2,4-Trichlorobenzene		0.7553	14.7		
1,2,4-Trimethylbenzene		2.395	14.2		
1,2-Dibromo-3-Chloropropane		0.1166	16.2		0.99900
1,2-Dibromoethane		0.2259	13.6		
1,2-Dichlorobenzene		1.338	15.6	1.00000	
1,2-Dichloroethane		0.3045	5.19		
1,3,5-Trimethylbenzene		3.088	11.5		
1,3-Dichlorobenzene		1.174	8.64		
1,3-Dichloropropane		0.4061	14.2		
1,4-Dichlorobenzene		1.215	12.5		
2,2-Dichloropropane		0.3380	5.98		
2-Butanone		0.08153	5.47		
2-Chloroethyl Vinyl Ether		0.09620	26.8		1.00000
2-Chlorotoluene		2.102	12.3		
2-Hexanone		0.1322	7.49		
4-Chlorotoluene		1.554	10.8		
4-Methyl-2-Pentanone		0.06200	4.77		
Acetone		0.05288	11.2		
Benzene		0.8900	11.7		
Bromobenzene		0.7691	11.7		
Bromochloromethane		0.1104	5.81		
Bromodichloromethane		0.2693	3.29		
Bromomethane		0.1716	10.7		
Carbon Disulfide		0.6995	7.14		
Carbon Tetrachloride		0.2761	4.74		
Chloroethane		0.1223	7.92		
Dibromochloromethane		0.3035	14.0		
Dibromomethane		0.1134	4.65		

INT_CAL - Modified 03/06/2008
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Login Number: L09030497
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Dichlorodifluoromethane		0.2296	7.70		
Hexachlorobutadiene		0.4610	12.7		
Isopropylbenzene		1.233	6.54		
Methylene Chloride		0.3418	57.3	0.99900	
Naphthalene		1.213	13.6		
Styrene		0.5724	23.1		1.00000
Tetrachloroethene		0.2654	6.64		
Trichloroethene		0.2329	3.80		
Trichlorofluoromethane		0.3511	7.69		
Vinyl Acetate		0.4106	39.0		0.99800
cis-1,2-Dichloroethene		0.2353	3.88		
cis-1,3-Dichloropropene		0.2982	3.63		
m-,p-Xylene		0.4183	12.6		
n-Butylbenzene		1.578	12.3		
n-Propylbenzene		2.444	14.3		
o-Xylene		0.4523	8.26		
p-Isopropyltoluene		2.388	15.5		1.00000
sec-Butylbenzene		2.894	12.5		
tert-Butylbenzene		0.6459	13.8		
trans-1,2-Dichloroethene		0.2154	3.55		
trans-1,3-Dichloropropene		0.4012	15.0		

R = Correlation coefficient; 0.995 minimum
R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

Login Number: L09030497
Analytical Method: 8260B

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	2202.00000	0.1895	1.00	5391.00000	0.1825
1,2-Dichloropropane	NA	NA	NA	0.400	3447.00000	0.2967	1.00	7961.00000	0.2695
Chloroform	0.300	3765.00000	0.4221	0.400	5303.00000	0.4565	1.00	11678.0000	0.3954
Ethylbenzene	NA	NA	NA	0.400	2216.00000	0.3389	1.00	4956.00000	0.3082
Toluene	NA	NA	NA	0.400	8101.00000	1.239	1.00	17704.0000	1.101
Vinyl Chloride	NA	NA	NA	0.400	4209.00000	0.3623	1.00	8395.00000	0.2842
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	1867.00000	0.7911	1.00	4382.00000	0.7360
1,1-Dichloroethane	NA	NA	NA	0.400	5980.00000	0.5148	1.00	14353.0000	0.4859
Bromoform	NA	NA	NA	NA	NA	NA	1.00	2932.00000	0.1823
Chlorobenzene	NA	NA	NA	0.400	5231.00000	0.8000	1.00	11318.0000	0.7038
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	11928.0000	0.4038
1,1,1,2-Tetrachloroethane	NA	NA	NA	0.400	2590.00000	0.3961	1.00	6498.00000	0.4040
1,1,1-Trichloroethane	NA	NA	NA	0.400	4101.00000	0.3530	1.00	9575.00000	0.3242
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	1.00	3938.00000	0.2449
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7941.00000	0.2688
1,2,3-Trichlorobenzene	0.300	1998.00000	1.075	0.400	1820.00000	0.7712	1.00	4215.00000	0.7079
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	1.00	988.000000	0.1659
1,2,4-Trichlorobenzene	NA	NA	NA	0.400	1882.00000	0.7975	1.00	3520.00000	0.5912
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA	1.00	15067.0000	2.531
1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA	0.400	1481.00000	0.2265	1.00	4160.00000	0.2587
1,2-Dichlorobenzene	0.300	3433.00000	1.847	0.400	3104.00000	1.315	1.00	7574.00000	1.272
1,2-Dichloroethane	NA	NA	NA	0.400	3716.00000	0.3199	1.00	9055.00000	0.3066
1,3,5-Trimethylbenzene	NA	NA	NA	0.400	7819.00000	3.313	1.00	17996.0000	3.023
1,3-Dichlorobenzene	NA	NA	NA	0.400	2706.00000	1.147	1.00	6086.00000	1.022
1,3-Dichloropropane	NA	NA	NA	0.400	2928.00000	0.4478	1.00	7472.00000	0.4646
1,4-Dichlorobenzene	0.300	2921.00000	1.571	0.400	3078.00000	1.304	1.00	6987.00000	1.174
2,2-Dichloropropane	NA	NA	NA	0.400	4197.00000	0.3613	1.00	10617.0000	0.3594
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NA	NA	NA	0.400	5777.00000	2.448	1.00	12608.0000	2.118
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NA	NA	NA	0.400	3939.00000	1.669	1.00	7649.00000	1.285
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	13114.0000	1.129	1.00	26569.0000	0.8995
Bromobenzene	0.300	1718.00000	0.9242	0.400	1696.00000	0.7187	1.00	4142.00000	0.6957
Bromochloromethane	NA	NA	NA	0.400	1257.00000	0.1082	1.00	3455.00000	0.1170
Bromodichloromethane	NA	NA	NA	0.400	3178.00000	0.2736	1.00	7931.00000	0.2685
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	5192.00000	0.1758
Carbon Disulfide	NA	NA	NA	NA	NA	NA	1.00	21416.0000	0.7250
Carbon Tetrachloride	NA	NA	NA	0.400	3008.00000	0.2589	1.00	7989.00000	0.2705

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Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	11388.0000	0.1885	5.00	30423.0000	0.1915	20.0	129120.000	0.1924
1,2-Dichloropropane	2.00	16354.0000	0.2707	5.00	44161.0000	0.2779	20.0	179925.000	0.2681
Chloroform	2.00	23569.0000	0.3901	5.00	63989.0000	0.4027	20.0	260617.000	0.3883
Ethylbenzene	2.00	9877.00000	0.2994	5.00	29075.0000	0.3171	20.0	181566.000	0.3766
Toluene	2.00	37280.0000	1.130	5.00	110456.000	1.205	20.0	568852.000	1.180
Vinyl Chloride	2.00	19052.0000	0.3153	5.00	46331.0000	0.2916	20.0	176450.000	0.2629
1,1,2,2-Tetrachloroethane	2.00	9114.00000	0.7433	5.00	26446.0000	0.8314	20.0	120640.000	0.7847
1,1-Dichloroethane	2.00	28294.0000	0.4683	5.00	78309.0000	0.4928	20.0	317741.000	0.4734
Bromoform	2.00	6657.00000	0.2018	5.00	18768.0000	0.2047	20.0	88251.0000	0.1831
Chlorobenzene	2.00	23414.0000	0.7098	5.00	66062.0000	0.7205	20.0	364419.000	0.7560
Chloromethane	2.00	28151.0000	0.4659	5.00	66075.0000	0.4158	20.0	264636.000	0.3943
1,1,1,2-Tetrachloroethane	2.00	13020.0000	0.3947	5.00	37528.0000	0.4093	20.0	158277.000	0.3283
1,1,1-Trichloroethane	2.00	20813.0000	0.3445	5.00	54388.0000	0.3423	20.0	226334.000	0.3372
1,1,2-Trichloroethane	2.00	8629.00000	0.2616	5.00	25114.0000	0.2739	20.0	104733.000	0.2173
1,1-Dichloropropene	2.00	17581.0000	0.2910	5.00	50118.0000	0.3154	20.0	206930.000	0.3083
1,2,3-Trichlorobenzene	2.00	8972.00000	0.7317	5.00	29413.0000	0.9247	20.0	150336.000	0.9778
1,2,3-Trichloropropane	2.00	2296.00000	0.1872	5.00	8209.00000	0.2581	20.0	34955.0000	0.2274
1,2,4-Trichlorobenzene	2.00	7582.00000	0.6183	5.00	24334.0000	0.7650	20.0	139374.000	0.9065
1,2,4-Trimethylbenzene	2.00	30951.0000	2.524	5.00	83508.0000	2.625	20.0	407638.000	2.651
1,2-Dibromo-3-Chloropropane	2.00	1387.00000	0.1131	5.00	4194.00000	0.1319	20.0	21152.0000	0.1376
1,2-Dibromoethane	2.00	7978.00000	0.2419	5.00	23909.0000	0.2607	20.0	105090.000	0.2180
1,2-Dichlorobenzene	2.00	14783.0000	1.206	5.00	39283.0000	1.235	20.0	196122.000	1.276
1,2-Dichloroethane	2.00	18595.0000	0.3077	5.00	50508.0000	0.3178	20.0	209078.000	0.3115
1,3,5-Trimethylbenzene	2.00	38274.0000	3.121	5.00	110038.000	3.459	20.0	523415.000	3.405
1,3-Dichlorobenzene	2.00	13095.0000	1.068	5.00	37192.0000	1.169	20.0	189568.000	1.233
1,3-Dichloropropane	2.00	14347.0000	0.4350	5.00	41484.0000	0.4524	20.0	182014.000	0.3776
1,4-Dichlorobenzene	2.00	12921.0000	1.054	5.00	37757.0000	1.187	20.0	183358.000	1.193
2,2-Dichloropropane	2.00	20892.0000	0.3458	5.00	54768.0000	0.3447	20.0	223111.000	0.3324
2-Butanone	NA	NA	NA	5.00	14139.0000	0.08900	20.0	55998.0000	0.08340
2-Chloroethyl Vinyl Ether	2.00	3445.00000	0.05700	5.00	11195.0000	0.07040	20.0	70968.0000	0.1057
2-Chlorotoluene	2.00	23650.0000	1.929	5.00	62080.0000	1.952	20.0	350791.000	2.282
2-Hexanone	NA	NA	NA	5.00	10691.0000	0.1166	20.0	62637.0000	0.1299
4-Chlorotoluene	2.00	16803.0000	1.370	5.00	48621.0000	1.529	20.0	238323.000	1.550
4-Methyl-2-Pentanone	NA	NA	NA	5.00	9058.00000	0.05700	20.0	43461.0000	0.06480
Acetone	NA	NA	NA	5.00	10133.0000	0.06380	20.0	35127.0000	0.05230
Benzene	2.00	51554.0000	0.8532	5.00	139846.000	0.8800	20.0	586477.000	0.8738
Bromobenzene	2.00	8732.00000	0.7121	5.00	24080.0000	0.7570	20.0	130066.000	0.8460
Bromochloromethane	2.00	6796.00000	0.1125	5.00	18750.0000	0.1180	20.0	74231.0000	0.1106
Bromodichloromethane	2.00	15558.0000	0.2575	5.00	45047.0000	0.2835	20.0	183553.000	0.2735
Bromomethane	2.00	12059.0000	0.1996	5.00	30234.0000	0.1903	20.0	105356.000	0.1570
Carbon Disulfide	2.00	43608.0000	0.7217	5.00	116649.000	0.7341	20.0	485162.000	0.7229
Carbon Tetrachloride	2.00	16790.0000	0.2779	5.00	46444.0000	0.2923	20.0	190198.000	0.2834

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Column ID: F

Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	329580.000	0.1865	100	762552.000	0.1982	200	1363656.00	0.1776
1,2-Dichloropropane	50.0	459398.000	0.2600	100	1033249.00	0.2686	200	1926295.00	0.2509
Chloroform	50.0	657133.000	0.3718	100	1495126.00	0.3887	200	2658987.00	0.3463
Ethylbenzene	50.0	553747.000	0.4040	100	1250773.00	0.4287	200	2576983.00	0.4108
Toluene	50.0	1498157.00	1.093	100	3342944.00	1.146	200	6028123.00	0.9609
Vinyl Chloride	50.0	427744.000	0.2420	100	942149.000	0.2449	200	1396742.00	0.1819
1,1,2,2-Tetrachloroethane	50.0	306843.000	0.6188	100	612994.000	0.4964	NA	NA	NA
1,1-Dichloroethane	50.0	803255.000	0.4545	100	1819010.00	0.4729	200	3177501.00	0.4138
Bromoform	50.0	235033.000	0.1715	100	491069.000	0.1683	200	918842.000	0.1465
Chlorobenzene	50.0	1018617.00	0.7431	100	2241462.00	0.7682	200	4390321.00	0.6998
Chloromethane	50.0	706350.000	0.3997	100	1569584.00	0.4080	200	3078222.00	0.4009
1,1,1,2-Tetrachloroethane	50.0	408434.000	0.2980	100	882662.000	0.3025	NA	NA	NA
1,1,1-Trichloroethane	50.0	579114.000	0.3277	100	1335703.00	0.3472	200	2355450.00	0.3068
1,1,2-Trichloroethane	50.0	271102.000	0.1978	100	559618.000	0.1918	NA	NA	NA
1,1-Dichloropropene	50.0	519605.000	0.2940	100	1203619.00	0.3129	200	2151741.00	0.2802
1,2,3-Trichlorobenzene	50.0	439450.000	0.8862	100	993490.000	0.8045	200	2018460.00	0.6776
1,2,3-Trichloropropane	50.0	93774.0000	0.1891	100	190746.000	0.1545	NA	NA	NA
1,2,4-Trichlorobenzene	50.0	427613.000	0.8624	100	987228.000	0.7994	200	2091393.00	0.7021
1,2,4-Trimethylbenzene	50.0	1241658.00	2.504	100	2775026.00	2.247	200	5012151.00	1.683
1,2-Dibromo-3-Chloropropane	50.0	61928.0000	0.1249	100	130743.000	0.1059	200	256844.000	0.08620
1,2-Dibromoethane	50.0	268362.000	0.1958	100	523939.000	0.1796	NA	NA	NA
1,2-Dichlorobenzene	50.0	643024.000	1.297	100	1555334.00	1.260	NA	NA	NA
1,2-Dichloroethane	50.0	528028.000	0.2988	100	1169626.00	0.3041	200	2067950.00	0.2693
1,3,5-Trimethylbenzene	50.0	1409824.00	2.843	100	3031588.00	2.455	NA	NA	NA
1,3-Dichlorobenzene	50.0	642449.000	1.296	100	1616456.00	1.309	200	3429508.00	1.151
1,3-Dichloropropane	50.0	467355.000	0.3409	100	947207.000	0.3246	NA	NA	NA
1,4-Dichlorobenzene	50.0	577078.000	1.164	100	1479404.00	1.198	200	3242118.00	1.088
2,2-Dichloropropane	50.0	568501.000	0.3217	100	1302298.00	0.3386	200	2302408.00	0.2999
2-Butanone	50.0	143467.000	0.08120	100	304541.000	0.07920	200	581268.000	0.07570
2-Chloroethyl Vinyl Ether	50.0	198911.000	0.1126	100	440872.000	0.1146	200	897798.000	0.1169
2-Chlorotoluene	50.0	1162356.00	2.344	100	2586259.00	2.094	200	4871025.00	1.635
2-Hexanone	50.0	199383.000	0.1455	100	408127.000	0.1399	200	823313.000	0.1312
4-Chlorotoluene	50.0	857122.000	1.729	100	2180549.00	1.766	200	4564424.00	1.532
4-Methyl-2-Pentanone	50.0	115312.000	0.06520	100	238672.000	0.06200	200	474624.000	0.06180
Acetone	50.0	92985.0000	0.05260	100	205962.000	0.05350	200	364614.000	0.04750
Benzene	50.0	1505910.00	0.8521	100	3337022.00	0.8675	200	5872630.00	0.7648
Bromobenzene	50.0	427493.000	0.8621	100	937993.000	0.7596	200	1926786.00	0.6468
Bromochloromethane	50.0	189265.000	0.1071	100	430334.000	0.1119	200	749143.000	0.09760
Bromodichloromethane	50.0	469646.000	0.2658	100	1055327.00	0.2744	200	1978771.00	0.2577
Bromomethane	50.0	261442.000	0.1479	100	649442.000	0.1688	200	1240282.00	0.1615
Carbon Disulfide	50.0	1240883.00	0.7022	100	2696693.00	0.7011	200	4527199.00	0.5896
Carbon Tetrachloride	50.0	485424.000	0.2747	100	1123796.00	0.2922	200	1988639.00	0.2590

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Column ID: F

Analyte	WG297559-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1,2-Tetrachloroethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,1-Dichloropropene	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA
1,2,4-Trimethylbenzene	NA	NA	NA
1,2-Dibromo-3-Chloropropane	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
1,3,5-Trimethylbenzene	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA
1,3-Dichloropropane	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA
2,2-Dichloropropane	NA	NA	NA
2-Butanone	300	891790.000	0.08070
2-Chloroethyl Vinyl Ether	NA	NA	NA
2-Chlorotoluene	NA	NA	NA
2-Hexanone	300	850457.000	0.1298
4-Chlorotoluene	NA	NA	NA
4-Methyl-2-Pentanone	300	676286.000	0.06120
Acetone	300	525628.000	0.04760
Benzene	NA	NA	NA
Bromobenzene	NA	NA	NA
Bromochloromethane	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA

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Login Number: L09030497
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	NA	NA	NA	NA	NA	NA	1.00	3089.00000	0.1046
Dibromochloromethane	NA	NA	NA	0.400	2254.00000	0.3447	1.00	4925.00000	0.3062
Dibromomethane	NA	NA	NA	0.400	1212.00000	0.1043	1.00	3489.00000	0.1181
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	1.00	5897.00000	0.1996
Hexachlorobutadiene	NA	NA	NA	0.400	958.000000	0.4059	1.00	2562.00000	0.4303
Isopropylbenzene	NA	NA	NA	0.400	8778.00000	1.343	1.00	20436.0000	1.271
Methylene Chloride	NA	NA	NA	0.400	8581.00000	0.7387	1.00	13415.0000	0.4542
Naphthalene	NA	NA	NA	0.400	3205.00000	1.358	1.00	6377.00000	1.071
Styrene	NA	NA	NA	NA	NA	NA	1.00	7775.00000	0.4835
Tetrachloroethene	NA	NA	NA	0.400	1770.00000	0.2707	1.00	4245.00000	0.2640
Trichloroethene	NA	NA	NA	0.400	2639.00000	0.2272	1.00	6613.00000	0.2239
Trichlorofluoromethane	NA	NA	NA	0.400	4216.00000	0.3629	1.00	9058.00000	0.3067
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2851.00000	0.2454	1.00	7192.00000	0.2435
cis-1,3-Dichloropropene	NA	NA	NA	0.400	3509.00000	0.3021	1.00	8302.00000	0.2811
m-,p-Xylene	NA	NA	NA	0.800	5632.00000	0.4307	2.00	11900.0000	0.3700
n-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	9829.00000	1.651
n-Propylbenzene	NA	NA	NA	0.400	6215.00000	2.634	1.00	13508.0000	2.269
o-Xylene	NA	NA	NA	NA	NA	NA	1.00	6816.00000	0.4238
p-Isopropyltoluene	NA	NA	NA	NA	NA	NA	1.00	15139.0000	2.543
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	17410.0000	2.924
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	4285.00000	0.7197
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2506.00000	0.2157	1.00	6693.00000	0.2266
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7174.00000	0.4461

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Login Number: L09030497
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	2.00	7583.00000	0.1255	5.00	20796.0000	0.1309	20.0	83526.0000	0.1244
Dibromochloromethane	2.00	11508.0000	0.3489	5.00	30891.0000	0.3369	20.0	137608.000	0.2855
Dibromomethane	2.00	6927.00000	0.1146	5.00	18763.0000	0.1181	20.0	78492.0000	0.1169
Dichlorodifluoromethane	2.00	14976.0000	0.2479	5.00	38579.0000	0.2428	20.0	159365.000	0.2374
Hexachlorobutadiene	2.00	5571.00000	0.4543	5.00	16981.0000	0.5339	20.0	84203.0000	0.5477
Isopropylbenzene	2.00	39930.0000	1.211	5.00	115346.000	1.258	20.0	562076.000	1.166
Methylene Chloride	2.00	18642.0000	0.3085	5.00	42380.0000	0.2667	20.0	146396.000	0.2181
Naphthalene	2.00	12224.0000	0.9969	5.00	37197.0000	1.169	20.0	217737.000	1.416
Styrene	2.00	15261.0000	0.4627	5.00	43957.0000	0.4794	20.0	259223.000	0.5377
Tetrachloroethene	2.00	9504.00000	0.2881	5.00	25728.0000	0.2806	20.0	130480.000	0.2707
Trichloroethene	2.00	13526.0000	0.2239	5.00	37297.0000	0.2347	20.0	161970.000	0.2413
Trichlorofluoromethane	2.00	23131.0000	0.3828	5.00	59300.0000	0.3732	20.0	242919.000	0.3619
Vinyl Acetate	2.00	35900.0000	0.5941	5.00	95835.0000	0.6031	20.0	294336.000	0.4385
cis-1,2-Dichloroethene	2.00	13973.0000	0.2313	5.00	36900.0000	0.2322	20.0	158622.000	0.2363
cis-1,3-Dichloropropene	2.00	17270.0000	0.2858	5.00	49310.0000	0.3103	20.0	209487.000	0.3121
m-,p-Xylene	4.00	24837.0000	0.3765	10.0	65350.0000	0.3564	40.0	376375.000	0.3904
n-Butylbenzene	2.00	22062.0000	1.799	5.00	54389.0000	1.710	20.0	238553.000	1.552
n-Propylbenzene	2.00	25259.0000	2.060	5.00	65575.0000	2.062	20.0	349035.000	2.270
o-Xylene	2.00	14065.0000	0.4264	5.00	37506.0000	0.4090	20.0	210116.000	0.4359
p-Isopropyltoluene	2.00	32886.0000	2.682	5.00	87167.0000	2.740	20.0	400050.000	2.602
sec-Butylbenzene	2.00	37920.0000	3.092	5.00	104048.000	3.271	20.0	504218.000	3.280
tert-Butylbenzene	2.00	7952.00000	0.6485	5.00	24347.0000	0.7654	20.0	99562.0000	0.6476
trans-1,2-Dichloroethene	2.00	12925.0000	0.2139	5.00	33512.0000	0.2109	20.0	145299.000	0.2165
trans-1,3-Dichloropropene	2.00	15479.0000	0.4693	5.00	40467.0000	0.4413	20.0	185868.000	0.3856

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Login Number: L09030497
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	50.0	206513.000	0.1169	100	514022.000	0.1336	200	925113.000	0.1205
Dibromochloromethane	50.0	353308.000	0.2577	100	713925.000	0.2447	NA	NA	NA
Dibromomethane	50.0	199907.000	0.1131	100	445320.000	0.1158	200	817443.000	0.1065
Dichlorodifluoromethane	50.0	399973.000	0.2263	100	923781.000	0.2402	200	1633246.00	0.2127
Hexachlorobutadiene	50.0	240534.000	0.4851	100	556239.000	0.4504	200	1132043.00	0.3800
Isopropylbenzene	50.0	1754773.00	1.280	100	3656932.00	1.253	200	6767653.00	1.079
Methylene Chloride	50.0	353244.000	0.1999	100	795663.000	0.2068	NA	NA	NA
Naphthalene	50.0	675620.000	1.363	100	1378729.00	1.117	NA	NA	NA
Styrene	50.0	945498.000	0.6898	100	2279199.00	0.7812	NA	NA	NA
Tetrachloroethene	50.0	334935.000	0.2443	100	785824.000	0.2693	200	1475682.00	0.2352
Trichloroethene	50.0	411484.000	0.2328	100	958795.000	0.2493	200	1764921.00	0.2299
Trichlorofluoromethane	50.0	622383.000	0.3522	100	1365200.00	0.3549	200	2412845.00	0.3142
Vinyl Acetate	50.0	540081.000	0.3056	100	1104768.00	0.2872	200	1806316.00	0.2353
cis-1,2-Dichloroethene	50.0	411821.000	0.2330	100	936428.000	0.2434	200	1670024.00	0.2175
cis-1,3-Dichloropropene	50.0	531287.000	0.3006	100	1149697.00	0.2989	200	2263320.00	0.2948
m-,p-Xylene	100	1283637.00	0.4682	200	2928843.00	0.5019	400	5671213.00	0.4520
n-Butylbenzene	50.0	748338.000	1.509	100	2012828.00	1.630	200	3562919.00	1.196
n-Propylbenzene	50.0	1424532.00	2.873	100	3666084.00	2.969	200	7190902.00	2.414
o-Xylene	50.0	672761.000	0.4908	100	1472355.00	0.5046	200	2982505.00	0.4754
p-Isopropyltoluene	50.0	1146412.00	2.312	100	2642799.00	2.140	200	5059144.00	1.698
sec-Butylbenzene	50.0	1359469.00	2.742	100	3303794.00	2.675	200	6769146.00	2.273
tert-Butylbenzene	50.0	278343.000	0.5613	100	657666.000	0.5326	NA	NA	NA
trans-1,2-Dichloroethene	50.0	381454.000	0.2158	100	855793.000	0.2225	200	1542763.00	0.2009
trans-1,3-Dichloropropene	50.0	465577.000	0.3396	100	948993.000	0.3253	NA	NA	NA

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Login Number: L09030497
Analytical Method: 8260B

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-11		
	CONC	RESP	RF
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Dibromomethane	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA
Isopropylbenzene	NA	NA	NA
Methylene Chloride	NA	NA	NA
Naphthalene	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA
Vinyl Acetate	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-, p-Xylene	NA	NA	NA
n-Butylbenzene	NA	NA	NA
n-Propylbenzene	NA	NA	NA
o-Xylene	NA	NA	NA
p-Isopropyltoluene	NA	NA	NA
sec-Butylbenzene	NA	NA	NA
tert-Butylbenzene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

INT_CAL - Modified 03/06/2008
PDF File ID: 1352304
Report generated 03/27/2009 12:52



Login Number: L09030497 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
Ical Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	20.0	ug/L	0.395	0.100	30	
1,1-Dichloroethene	CCC	20.0	21.5	ug/L	0.202	7.30	30	
1,2-Dichloropropane	CCC	20.0	20.1	ug/L	0.271	0.300	30	
Ethylbenzene	CCC	20.0	21.9	ug/L	0.394	9.30	30	
Toluene	CCC	20.0	20.8	ug/L	1.18	4.20	30	
Vinyl Chloride	CCC	20.0	19.1	ug/L	0.263	4.60	30	
Bromoform	SPCC	20.0	20.5	ug/L	0.184	2.50	30	
Chlorobenzene	SPCC	20.0	21.2	ug/L	0.782	6.10	30	
Chloromethane	SPCC	20.0	20.3	ug/L	0.419	1.60	30	
1,1-Dichloroethane	SPCC	20.0	20.0	ug/L	0.473	0.100	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	20.5	ug/L	0.740	2.50	30	
Acetone		20.0	19.5	ug/L	0.0517	2.30	30	
Benzene		20.0	20.4	ug/L	0.900	1.80	30	
Bromobenzene		20.0	23.1	ug/L	0.887	15.4	30	
Bromochloromethane		20.0	20.6	ug/L	0.113	2.80	30	
Bromodichloromethane		20.0	21.5	ug/L	0.290	7.60	30	
Bromomethane		20.0	19.7	ug/L	0.169	1.50	30	
2-Butanone		20.0	19.7	ug/L	0.0805	1.30	30	
n-Butylbenzene		20.0	20.7	ug/L	1.63	3.30	30	
sec-Butylbenzene		20.0	23.5	ug/L	3.39	17.3	30	
tert-Butylbenzene		20.0	20.5	ug/L	0.661	2.40	30	
Carbon Disulfide		20.0	19.6	ug/L	0.685	2.10	30	
Carbon Tetrachloride		20.0	21.0	ug/L	0.290	5.20	30	
Dibromochloromethane		20.0	19.3	ug/L	0.293	3.50	30	
Chloroethane		20.0	22.3	ug/L	0.137	11.7	30	
2-Chloroethyl Vinyl Ether		20.0	19.6	ug/L	0.104	2.20	30	
2-Chlorotoluene		20.0	22.0	ug/L	2.31	9.90	30	
4-Chlorotoluene		20.0	22.0	ug/L	1.71	10.0	30	
1,2-Dibromo-3-Chloropropane		20.0	21.0	ug/L	0.135	4.80	30	
1,2-Dibromoethane		20.0	19.7	ug/L	0.222	1.70	30	
Dibromomethane		20.0	20.8	ug/L	0.118	4.20	30	
1,2-Dichlorobenzene		20.0	20.6	ug/L	1.31	3.20	30	
1,3-Dichlorobenzene		20.0	21.6	ug/L	1.27	8.00	30	
1,4-Dichlorobenzene		20.0	19.9	ug/L	1.21	0.500	30	
Dichlorodifluoromethane		20.0	24.1	ug/L	0.276	20.4	30	
1,2-Dichloroethane		20.0	19.8	ug/L	0.301	1.10	30	
cis-1,2-Dichloroethene		20.0	21.3	ug/L	0.250	6.30	30	
trans-1,2-Dichloroethene		20.0	21.2	ug/L	0.229	6.10	30	
1,3-Dichloropropane		20.0	19.2	ug/L	0.390	3.90	30	
2,2-Dichloropropane		20.0	20.2	ug/L	0.341	0.900	30	
cis-1,3-Dichloropropene		20.0	21.0	ug/L	0.314	5.10	30	
trans-1,3-Dichloropropene		20.0	17.3	ug/L	0.347	13.6	30	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 1352305
Report generated 03/27/2009 12:53



Login Number: L09030497 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
Ical Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
1,1-Dichloropropene	20.0	20.5	ug/L	0.303	2.60	30	
2-Hexanone	20.0	19.4	ug/L	0.128	3.10	30	
Hexachlorobutadiene	20.0	24.5	ug/L	0.566	22.7	30	
Isopropylbenzene	20.0	18.2	ug/L	1.12	9.00	30	
p-Isopropyltoluene	20.0	21.6	ug/L	2.70	8.20	30	
4-Methyl-2-Pentanone	20.0	20.6	ug/L	0.0640	3.10	30	
Methylene Chloride	20.0	21.5	ug/L	0.229	7.60	30	
Naphthalene	20.0	23.3	ug/L	1.41	16.5	30	
n-Propylbenzene	20.0	19.9	ug/L	2.43	0.700	30	
Styrene	20.0	19.7	ug/L	0.587	1.70	30	
1,1,1,2-Tetrachloroethane	20.0	18.4	ug/L	0.333	8.00	30	
Tetrachloroethene	20.0	20.4	ug/L	0.271	2.10	30	
1,2,3-Trichlorobenzene	20.0	21.4	ug/L	0.981	6.80	30	
1,2,4-Trichlorobenzene	20.0	24.7	ug/L	0.931	23.3	30	
1,1,1-Trichloroethane	20.0	20.4	ug/L	0.341	1.80	30	
1,1,2-Trichloroethane	20.0	19.6	ug/L	0.226	2.20	30	
Trichloroethene	20.0	21.1	ug/L	0.245	5.30	30	
Trichlorofluoromethane	20.0	20.9	ug/L	0.367	4.60	30	
1,2,3-Trichloropropane	20.0	21.3	ug/L	0.229	6.30	30	
1,2,4-Trimethylbenzene	20.0	23.5	ug/L	2.81	17.3	30	
1,3,5-Trimethylbenzene	20.0	22.5	ug/L	3.48	12.6	30	
Vinyl Acetate	20.0	14.1	ug/L	0.286	29.4	40	
o-Xylene	20.0	20.9	ug/L	0.473	4.60	30	
m-,p-Xylene	40.0	41.0	ug/L	0.428	2.40	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298268-02
Instrument ID: HPMS10 Run Time: 07:51 Method: 8260B
File ID: 10M71341 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298271 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	45.0	ug/L	0.356	10.1	20	
1,1-Dichloroethene	CCC	50.0	47.1	ug/L	0.178	5.71	20	
1,2-Dichloropropane	CCC	50.0	46.4	ug/L	0.251	7.20	20	
Ethylbenzene	CCC	50.0	53.7	ug/L	0.387	7.32	20	
Toluene	CCC	50.0	49.0	ug/L	1.11	1.93	20	
Vinyl Chloride	CCC	50.0	44.7	ug/L	0.237	10.7	20	
Bromoform	SPCC	50.0	50.1	ug/L	0.180	0.286	40	
Chlorobenzene	SPCC	50.0	50.3	ug/L	0.743	0.671	40	
Chloromethane	SPCC	50.0	41.0	ug/L	0.339	17.9	40	
1,1-Dichloroethane	SPCC	50.0	46.2	ug/L	0.436	7.70	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	45.4	ug/L	0.588	9.27	40	
Acetone		50.0	50.6	ug/L	0.0536	1.29	40	
Benzene		50.0	46.0	ug/L	0.814	7.95	40	
Bromobenzene		50.0	49.8	ug/L	0.766	0.474	40	
Bromochloromethane		50.0	46.8	ug/L	0.103	6.46	40	
Bromodichloromethane		50.0	48.6	ug/L	0.262	2.81	40	
Bromomethane		50.0	43.9	ug/L	0.151	12.2	40	
2-Butanone		50.0	50.6	ug/L	0.0825	1.23	40	
n-Butylbenzene		50.0	54.7	ug/L	1.73	9.42	40	
sec-Butylbenzene		50.0	41.3	ug/L	2.39	17.3	40	
tert-Butylbenzene		50.0	36.5	ug/L	0.472	26.9	40	
Carbon Disulfide		50.0	48.8	ug/L	0.682	2.48	40	
Carbon Tetrachloride		50.0	48.0	ug/L	0.265	3.94	40	
Dibromochloromethane		50.0	45.4	ug/L	0.276	9.13	40	
Chloroethane		50.0	44.8	ug/L	0.110	10.4	40	
2-Chloroethyl Vinyl Ether		50.0	46.4	ug/L	0.104	7.14	40	
2-Chlorotoluene		50.0	50.3	ug/L	2.11	0.510	40	
4-Chlorotoluene		50.0	51.7	ug/L	1.61	3.37	40	
1,2-Dibromo-3-Chloropropane		50.0	43.0	ug/L	0.105	14.0	40	
1,2-Dibromoethane		50.0	43.8	ug/L	0.198	12.4	40	
Dibromomethane		50.0	48.3	ug/L	0.110	3.43	40	
1,2-Dichlorobenzene		50.0	49.9	ug/L	1.27	0.240	40	
1,3-Dichlorobenzene		50.0	53.3	ug/L	1.25	6.68	40	
1,4-Dichlorobenzene		50.0	47.9	ug/L	1.16	4.12	40	
Dichlorodifluoromethane		50.0	50.4	ug/L	0.232	0.852	40	
1,2-Dichloroethane		50.0	46.5	ug/L	0.283	6.96	40	
cis-1,2-Dichloroethene		50.0	47.3	ug/L	0.223	5.36	40	
trans-1,2-Dichloroethene		50.0	46.6	ug/L	0.201	6.82	40	
1,3-Dichloropropane		50.0	43.4	ug/L	0.352	13.3	40	
2,2-Dichloropropane		50.0	45.7	ug/L	0.309	8.54	40	
cis-1,3-Dichloropropene		50.0	48.6	ug/L	0.290	2.83	40	
trans-1,3-Dichloropropene		50.0	44.3	ug/L	0.355	11.5	40	

CCV - Modified 03/05/2008
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Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298268-02
Instrument ID: HPMS10 Run Time: 07:51 Method: 8260B
File ID: 10M71341 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298271 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	48.0	ug/L	0.284	4.08	40	
2-Hexanone	50.0	56.0	ug/L	0.148	11.9	40	
Hexachlorobutadiene	50.0	52.4	ug/L	0.483	4.76	40	
Isopropylbenzene	50.0	46.3	ug/L	1.14	7.39	40	
p-Isopropyltoluene	50.0	48.9	ug/L	2.31	2.13	40	
4-Methyl-2-Pentanone	50.0	50.9	ug/L	0.0631	1.82	40	
Methylene Chloride	50.0	45.7	ug/L	0.190	8.51	40	
Naphthalene	50.0	49.7	ug/L	1.21	0.502	40	
n-Propylbenzene	50.0	52.7	ug/L	2.58	5.39	40	
Styrene	50.0	49.5	ug/L	0.667	1.03	40	
1,1,1,2-Tetrachloroethane	50.0	43.0	ug/L	0.311	14.0	40	
Tetrachloroethene	50.0	47.8	ug/L	0.254	4.36	40	
1,2,3-Trichlorobenzene	50.0	46.9	ug/L	0.827	6.29	40	
1,2,4-Trichlorobenzene	50.0	59.0	ug/L	0.891	17.9	40	
1,1,1-Trichloroethane	50.0	47.4	ug/L	0.318	5.28	40	
1,1,2-Trichloroethane	50.0	44.9	ug/L	0.208	10.2	40	
Trichloroethene	50.0	48.4	ug/L	0.225	3.23	40	
Trichlorofluoromethane	50.0	47.6	ug/L	0.334	4.81	40	
1,2,3-Trichloropropane	50.0	44.9	ug/L	0.176	10.3	40	
1,2,4-Trimethylbenzene	50.0	53.7	ug/L	2.57	7.42	40	
1,3,5-Trimethylbenzene	50.0	44.4	ug/L	2.74	11.3	40	
Vinyl Acetate	50.0	51.8	ug/L	0.331	3.52	40	
o-Xylene	50.0	50.2	ug/L	0.454	0.457	40	
m-,p-Xylene	100	105	ug/L	0.441	5.42	40	
1,2-Dichloroethene	100	93.9	ug/L	0.212	6.09	40	
Xylenes	150	156	ug/L	0.448	3.77	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

CCV - Modified 03/05/2008

PDF File ID: 1352307

Report generated 03/27/2009 12:53



Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298375-02
Instrument ID: HPMS10 Run Time: 07:51 Method: 8260B
File ID: 10M71367 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298376 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	46.8	ug/L	0.371	6.31	20	
1,1-Dichloroethene	CCC	50.0	49.8	ug/L	0.188	0.350	20	
1,2-Dichloropropane	CCC	50.0	47.4	ug/L	0.256	5.12	20	
Ethylbenzene	CCC	50.0	57.5	ug/L	0.415	15.1	20	
Toluene	CCC	50.0	51.2	ug/L	1.16	2.31	20	
Vinyl Chloride	CCC	50.0	41.3	ug/L	0.221	17.3	20	
Bromoform	SPCC	50.0	47.3	ug/L	0.170	5.33	40	
Chlorobenzene	SPCC	50.0	52.1	ug/L	0.768	4.16	40	
Chloromethane	SPCC	50.0	44.5	ug/L	0.368	10.9	40	
1,1-Dichloroethane	SPCC	50.0	48.3	ug/L	0.456	3.34	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	48.7	ug/L	0.622	2.50	40	
Acetone		50.0	50.1	ug/L	0.0530	0.280	40	
Benzene		50.0	47.5	ug/L	0.840	4.91	40	
Bromobenzene		50.0	56.0	ug/L	0.862	12.1	40	
Bromochloromethane		50.0	47.8	ug/L	0.106	4.43	40	
Bromodichloromethane		50.0	48.6	ug/L	0.262	2.78	40	
Bromomethane		50.0	45.7	ug/L	0.157	8.56	40	
2-Butanone		50.0	49.5	ug/L	0.0807	1.04	40	
n-Butylbenzene		50.0	54.7	ug/L	1.73	9.34	40	
sec-Butylbenzene		50.0	45.0	ug/L	2.60	10.0	40	
tert-Butylbenzene		50.0	40.3	ug/L	0.521	19.4	40	
Carbon Disulfide		50.0	50.3	ug/L	0.704	0.670	40	
Carbon Tetrachloride		50.0	48.8	ug/L	0.269	2.47	40	
Dibromochloromethane		50.0	42.6	ug/L	0.259	14.7	40	
Chloroethane		50.0	43.3	ug/L	0.106	13.3	40	
2-Chloroethyl Vinyl Ether		50.0	47.3	ug/L	0.106	5.45	40	
2-Chlorotoluene		50.0	57.6	ug/L	2.42	15.1	40	
4-Chlorotoluene		50.0	54.7	ug/L	1.70	9.40	40	
1,2-Dibromo-3-Chloropropane		50.0	46.3	ug/L	0.112	7.40	40	
1,2-Dibromoethane		50.0	43.0	ug/L	0.194	13.9	40	
Dibromomethane		50.0	48.8	ug/L	0.111	2.35	40	
1,2-Dichlorobenzene		50.0	52.8	ug/L	1.34	5.62	40	
1,3-Dichlorobenzene		50.0	57.5	ug/L	1.35	15.0	40	
1,4-Dichlorobenzene		50.0	49.5	ug/L	1.20	0.903	40	
Dichlorodifluoromethane		50.0	52.4	ug/L	0.241	4.80	40	
1,2-Dichloroethane		50.0	47.4	ug/L	0.288	5.30	40	
cis-1,2-Dichloroethene		50.0	49.6	ug/L	0.234	0.713	40	
trans-1,2-Dichloroethene		50.0	49.7	ug/L	0.214	0.682	40	
1,3-Dichloropropane		50.0	41.9	ug/L	0.341	16.2	40	
2,2-Dichloropropane		50.0	48.2	ug/L	0.326	3.65	40	
cis-1,3-Dichloropropene		50.0	48.6	ug/L	0.290	2.79	40	
trans-1,3-Dichloropropene		50.0	42.2	ug/L	0.338	15.7	40	

CCV - Modified 03/05/2008
PDF File ID: 1352307
Report generated 03/27/2009 12:53



Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298375-02
Instrument ID: HPMS10 Run Time: 07:51 Method: 8260B
File ID: 10M71367 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298376 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	49.7	ug/L	0.294	0.525	40	
2-Hexanone	50.0	59.0	ug/L	0.156	18.0	40	
Hexachlorobutadiene	50.0	43.4	ug/L	0.400	13.3	40	
Isopropylbenzene	50.0	49.2	ug/L	1.21	1.62	40	
p-Isopropyltoluene	50.0	50.9	ug/L	2.39	1.86	40	
4-Methyl-2-Pentanone	50.0	51.4	ug/L	0.0638	2.84	40	
Methylene Chloride	50.0	45.4	ug/L	0.189	9.16	40	
Naphthalene	50.0	57.3	ug/L	1.39	14.6	40	
n-Propylbenzene	50.0	58.6	ug/L	2.86	17.2	40	
Styrene	50.0	51.0	ug/L	0.691	2.03	40	
1,1,1,2-Tetrachloroethane	50.0	42.7	ug/L	0.309	14.5	40	
Tetrachloroethene	50.0	49.0	ug/L	0.260	2.07	40	
1,2,3-Trichlorobenzene	50.0	45.1	ug/L	0.799	9.70	40	
1,2,4-Trichlorobenzene	50.0	57.7	ug/L	0.872	15.4	40	
1,1,1-Trichloroethane	50.0	49.7	ug/L	0.333	0.679	40	
1,1,2-Trichloroethane	50.0	43.8	ug/L	0.202	12.5	40	
Trichloroethene	50.0	50.2	ug/L	0.234	0.401	40	
Trichlorofluoromethane	50.0	49.8	ug/L	0.350	0.454	40	
1,2,3-Trichloropropane	50.0	47.5	ug/L	0.185	4.92	40	
1,2,4-Trimethylbenzene	50.0	56.7	ug/L	2.71	13.3	40	
1,3,5-Trimethylbenzene	50.0	47.1	ug/L	2.91	5.77	40	
Vinyl Acetate	50.0	42.3	ug/L	0.279	15.4	40	
o-Xylene	50.0	53.5	ug/L	0.484	6.93	40	
m-,p-Xylene	100	112	ug/L	0.469	12.1	40	
1,2-Dichloroethene	100	99.3	ug/L	0.224	0.698	40	
Xylenes	150	166	ug/L	0.476	10.4	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030497
Instrument ID: HPMS10
Workgroup (AAB#): WG298271

CCV Number: WG298268-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298268-02	NA	NA	342843	886565	1232552
Upper Limit	NA	NA	685686	1773130	2465104
Lower Limit	NA	NA	171422	443283	616276
<u>L09030497-01</u>	<u>25.0</u>	<u>DL02</u>	<u>212566</u>	<u>529983</u>	<u>944350</u>
L09030497-02	1.00	01	218645	545084	967924
WG298271-01	1.00	01	230937	580465	1002814
WG298271-02	1.00	01	261907	750239	1097250
WG298271-03	1.00	01	266354	747245	1097108
WG298271-05	1.00	01	202006	497459	871128

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030497
Instrument ID: HPMS10
Workgroup (AAB#): WG298376

CCV Number: WG298375-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298375-02	NA	NA	316548	886971	1227554
Upper Limit	NA	NA	633096	1773942	2455108
Lower Limit	NA	NA	158274	443486	613777
<u>L09030497-01</u>	<u>10.0</u>	<u>DL03</u>	<u>242542</u>	<u>591610</u>	<u>1047405</u>
WG298376-01	1.00	01	234545	574851	1013397
WG298376-02	1.00	01	260789	772045	1115503

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030497
Instrument ID: HPMS10
Workgroup (AAB#): WG298271

CCV Number: WG298268-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298268-02	NA	NA	17.46	14.45	10.6
Upper Limit	NA	NA	17.96	14.95	11.1
Lower Limit	NA	NA	16.96	13.95	10.1
<u>L09030497-01</u>	<u>25.0</u>	<u>DL02</u>	17.46	14.45	10.6
L09030497-02	1.00	01	17.46	14.45	10.6
WG298271-01	1.00	01	17.46	14.45	10.6
WG298271-02	1.00	01	17.46	14.45	10.6
WG298271-03	1.00	01	17.46	14.45	10.6
WG298271-05	1.00	01	17.46	14.45	10.6

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030497
Instrument ID: HPMS10
Workgroup (AAB#): WG298376

CCV Number: WG298375-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298375-02	NA	NA	17.46	14.45	10.6
Upper Limit	NA	NA	17.96	14.95	11.1
Lower Limit	NA	NA	16.96	13.95	10.1
<u>L09030497-01</u>	<u>10.0</u>	<u>DL03</u>	17.46	14.45	10.6
WG298376-01	1.00	01	17.46	14.45	10.6
WG298376-02	1.00	01	17.46	14.45	10.6

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

2.2 Metals Data

2.2.1 Metals ICP-MS Data

2.2.1.1 Summary Data

LABORATORY REPORT

00087489

L09030497

04/01/09 10:22

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025
Project: Longhorn AAP
Site: LHAAP-16

P.O. Number: 389869/ 390836 (GWTP)**Sample Analysis Summary**

Client ID	Lab ID	Method	Dilution	Date Received
16WW35-031909	L09030497-01	6020	5	24-MAR-09
16WW35-031909	L09030497-01	6020	100	24-MAR-09
16WW24-031909	L09030497-02	6020	100	24-MAR-09
16WW25-031909	L09030497-03	6020	1	24-MAR-09
16WW25-031909	L09030497-03	6020	100	24-MAR-09
16WW23-031909	L09030497-04	6020	100	24-MAR-09



Report Number: **L09030497**Report Date : **April 1, 2009**

00087490

Sample Number: **L09030497-01**
Client ID: **16WW35-031909**
Matrix: **Water**
Workgroup Number: **WG298163**
Collect Date: **03/19/2009 09:10**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **5**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/24/2009 12:48**
Cal Date: **03/26/2009 12:01**
Run Date: **03/26/2009 17:38**
File ID: **EL.032609.173827**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Arsenic, Total	7440-38-2	0.123		0.00500	0.00125

Sample Number: **L09030497-01**
Client ID: **16WW35-031909**
Matrix: **Water**
Workgroup Number: **WG298163**
Collect Date: **03/19/2009 09:10**
Sample Tag: **DL02**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/24/2009 12:48**
Cal Date: **03/27/2009 10:31**
Run Date: **03/27/2009 13:33**
File ID: **EL.032709.133333**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Manganese, Total	7439-96-5	9.70		0.200	0.0500

Sample Number: **L09030497-02**
Client ID: **16WW24-031909**
Matrix: **Water**
Workgroup Number: **WG298163**
Collect Date: **03/19/2009 11:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/24/2009 12:48**
Cal Date: **03/27/2009 10:31**
Run Date: **03/27/2009 13:52**
File ID: **EL.032709.135248**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chromium, Total	7440-47-3	0.830		0.200	0.0500

Sample Number: **L09030497-03**
Client ID: **16WW25-031909**
Matrix: **Water**
Workgroup Number: **WG298163**
Collect Date: **03/19/2009 16:35**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **1**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/24/2009 12:48**
Cal Date: **03/26/2009 12:01**
Run Date: **03/26/2009 18:03**
File ID: **EL.032609.180358**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Arsenic, Total	7440-38-2	0.105		0.00100	0.000250

Sample Number: **L09030497-03**
Client ID: **16WW25-031909**
Matrix: **Water**
Workgroup Number: **WG298163**
Collect Date: **03/19/2009 16:35**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/24/2009 12:48**
Cal Date: **03/27/2009 10:31**
Run Date: **03/27/2009 13:59**
File ID: **EL.032709.135900**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Manganese, Total	7439-96-5	7.19		0.200	0.0500

Report Number: **L09030497**Report Date : **April 1, 2009**

00087495

Sample Number: **L09030497-04**
Client ID: **16WW23-031909**
Matrix: **Water**
Workgroup Number: **WG298163**
Collect Date: **03/19/2009 13:35**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **3015**
Analytical Method: **6020**
Analyst: **JYH**
Dilution: **100**
Units: **mg/L**

Instrument: **ELAN-ICP**
Prep Date: **03/24/2009 12:48**
Cal Date: **03/27/2009 10:31**
Run Date: **03/27/2009 14:05**
File ID: **EL.032709.140512**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Manganese, Total	7439-96-5	15.7		0.200	0.0500

2.2.1.2 QC Summary Data

Example 6020 Calculations
Perkin Elmer ELAN 6100

1.0 Initial Calibration (ICAL) Parameters

The system performs linear regression from data consisting of a blank and three standards.

2.0 Calculating the concentration (C) of an element in water using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Final volume

Vi = Initial volume

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in (ug/L)

Example:

0.1

100

40

1

0.25

3.0 Calculating the concentration (C) of an element in soil using data from prep log, run log, and quantitation report (note: the data system performs this calculation automatically when correction factors have been entered):

$$Cx = Cs \times \frac{Vf}{Vi} \times D$$

Where:

Cs = Concentration computed by the data system (ug/L)

Vf = Final volume

Vi = Initial volume

D = Dilution factor as a multiplier (10X = 10)

Cx = Concentration of element in (ug/kg)

Example:

0.1

200

0.5

1

40

4.0 Adjusting the concentration to dry weight:

$$Cdry = \frac{Cx \times 100}{Px}$$

Where:

Cx = Concentration calculated as received (wet basis)

Px = Percent solids of sample (%wt)

$Cdry$ = Concentration calculated as dry weight (ug/kg)

Example:

40

80

50

50 ug/kg = 0.050 mg/kg

Perkin Elmer ELAN ICP/MS**STANDARDS KEY****QC Std 1 - ICV****QC Std 2 - ICB****QC Std 3 - CRI - Soil****QC Std 4 - CRI - Water****QC Std 5 - ICSA****QC Std 6 - ICSAB****QC Std 7 - CCV****QC Std 8 - CCB****Calibration Solutions**

Analyte	Stock Conc. (mg/L)	S1 (mg/L)	S2 (mg/L)	S3 (mg/L)	S4 (mg/L)
Al	10	0	0.0004	0.05	0.1
Sb	10	0	0.0004	0.05	0.1
As	10	0	0.0004	0.05	0.1
Ba	10	0	0.0004	0.05	0.1
Be	10	0	0.0004	0.05	0.1
Ca	1000	0	0.04	5	10
Cd	10	0	0.0004	0.05	0.1
Cr	10	0	0.0004	0.05	0.1
Co	10	0	0.0004	0.05	0.1
Cu	10	0	0.0004	0.05	0.1
Fe	1000	0	0.04	5	10
Pb	10	0	0.0004	0.05	0.1
Mg	1000	0	0.04	5	10
Mn	10	0	0.0004	0.05	0.1
Ni	10	0	0.0004	0.05	0.1
K	1000	0	0.04	5	10
Se	10	0	0.0004	0.05	0.1
Ag	10	0	0.0004	0.05	0.1
Na	1000	0	0.04	5	10
Tl	10	0	0.0004	0.05	0.1
V	10	0	0.0004	0.05	0.1
Zn	10	0	0.0004	0.05	0.1

Workgroup: WG298079
Analyst: VC
Spike Analyst: VC
Run Date: 03/24/2009 12:48
Method: 3015

SOP: ME407 Revision 10
Spike Solution: STD30482
Spike Witness: REK
HNO3 Lot #: COA13771
Digest tubes Lot #: COA13696

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG298079-02	BLANK	1	40 mL	100 mL	206.765 g	206.741 g		
2	WG298079-03	LCS	1	40 mL	100 mL	205.398 g	205.398 g	.25 mL	
3	L09030466-02	SAMP	1	40 mL	100 mL	206.141 g	206.089 g		04/03/09
4	WG298079-01	REF	1	40 mL	100 mL	206.228 g	206.189 g		
5	L09030466-05	RS02	1	40 mL	100 mL	206.228 g	206.189 g		04/03/09
6	WG298079-04	MS	1	40 mL	100 mL	206.889 g	206.863 g	.25 mL	
7	L09030466-08	MS02	1	40 mL	100 mL	206.889 g	206.863 g	.25 mL	04/03/09
8	WG298079-05	MSD	1	40 mL	100 mL	206.639 g	206.621 g	.25 mL	
9	L09030466-11	SD02	1	40 mL	100 mL	206.639 g	206.621 g	.25 mL	04/03/09
10	L09030466-14	SAMP	1	40 mL	100 mL	207.218 g	207.202 g		04/03/09
11	L09030466-17	SAMP	1	40 mL	100 mL	205.916 g	205.877 g		04/03/09
12	L09030466-20	SAMP	1	40 mL	100 mL	207.057 g	207.039 g		04/03/09
13	L09030466-23	SAMP	1	40 mL	100 mL	205.636 g	205.618 g		04/03/09
14	L09030466-26	SAMP	1	40 mL	100 mL	205.126 g	205.101 g		04/03/09
15	L09030466-29	SAMP	1	40 mL	100 mL	207.062 g	207.039 g		04/03/09
16	L09030487-03	SAMP	1	40 mL	100 mL	206.659 g	206.648 g		04/03/09
17	L09030487-05	SAMP	1	40 mL	100 mL	206.657 g	206.633 g		04/03/09
18	L09030487-07	SAMP	1	40 mL	100 mL	206.623 g	206.599 g		04/03/09
19	L09030497-01	SAMP	1	40 mL	100 mL	207.133 g	207.098 g		03/27/09
20	L09030497-02	SAMP	1	40 mL	100 mL	208.031 g	208.012 g		03/27/09
21	L09030497-03	SAMP	1	40 mL	100 mL	208.808 g	208.8 g		03/27/09
22	L09030497-04	SAMP	1	40 mL	100 mL	206 g	205.992 g		03/27/09

Analyst: Vicki Collier

Reviewer: REK

Workgroup: WG298079
Analyst: VC
Spike Analyst: VC
Run Date: 03/24/2009 12:48
Method: 3015

SOP: ME407 Revision 10
Spike Solution: STD30482
Spike Witness: REK
HNO3 Lot #: COA13771
Digest tubes Lot #: COA13696

	SAMPLE #	Type	Matrix	Initial Amount	Final Volume	Initial Vessel Wt	Final Vessel Wt	Spike Amount	Due Date
1	WG298079-02	BLANK	1	40 mL	100 mL	206.765 g	206.741 g		
2	WG298079-03	LCS	1	40 mL	100 mL	205.398 g	205.398 g	.25 mL	
3	L09030466-02	SAMP	1	40 mL	100 mL	206.141 g	206.089 g		04/03/09
4	WG298079-01	REF	1	40 mL	100 mL	206.228 g	206.189 g		
5	L09030466-05	RS02	1	40 mL	100 mL	206.228 g	206.189 g		04/03/09
6	WG298079-04	MS	1	40 mL	100 mL	206.889 g	206.863 g	.25 mL	
7	L09030466-08	MS02	1	40 mL	100 mL	206.889 g	206.863 g	.25 mL	04/03/09
8	WG298079-05	MSD	1	40 mL	100 mL	206.639 g	206.621 g	.25 mL	
9	L09030466-11	SD02	1	40 mL	100 mL	206.639 g	206.621 g	.25 mL	04/03/09
10	L09030466-14	SAMP	1	40 mL	100 mL	207.218 g	207.202 g		04/03/09
11	L09030466-17	SAMP	1	40 mL	100 mL	205.916 g	205.877 g		04/03/09
12	L09030466-20	SAMP	1	40 mL	100 mL	207.057 g	207.039 g		04/03/09
13	L09030466-23	SAMP	1	40 mL	100 mL	205.636 g	205.618 g		04/03/09
14	L09030466-26	SAMP	1	40 mL	100 mL	205.126 g	205.101 g		04/03/09
15	L09030466-29	SAMP	1	40 mL	100 mL	207.062 g	207.039 g		04/03/09
16	L09030487-03	SAMP	1	40 mL	100 mL	206.659 g	206.648 g		04/03/09
17	L09030487-05	SAMP	1	40 mL	100 mL	206.657 g	206.633 g		04/03/09
18	L09030487-07	SAMP	1	40 mL	100 mL	206.623 g	206.599 g		04/03/09
19	L09030497-01	SAMP	1	40 mL	100 mL	207.133 g	207.098 g		03/27/09
20	L09030497-02	SAMP	1	40 mL	100 mL	208.031 g	208.012 g		03/27/09
21	L09030497-03	SAMP	1	40 mL	100 mL	208.808 g	208.8 g		03/27/09
22	L09030497-04	SAMP	1	40 mL	100 mL	206 g	205.992 g		03/27/09

Analyst: Vicki Collier

Reviewer: REK

Microbac Laboratories Inc.
Instrument Run Log

Instrument: ELAN-ICP Dataset: 032609A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: _____
 Maintenance Log ID: _____

Calibration Std: STD31921 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705
 Workgroups: 298309,298163

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.032609.113833	Blank	Blank		1		03/26/09 11:38
2	EL.032609.114413	WG298351-01	Calibration Point		1		03/26/09 11:44
3	EL.032609.114953	WG298351-02	Calibration Point		1		03/26/09 11:49
4	EL.032609.115534	WG298351-03	Calibration Point		1		03/26/09 11:55
5	EL.032609.120116	WG298351-04	Calibration Point		1		03/26/09 12:01
6	EL.032609.120659	WG298351-05	Initial Calibration Verification		1		03/26/09 12:06
7	EL.032609.121330	WG298351-06	Initial Calib Blank		1		03/26/09 12:13
8	EL.032609.122003	WG298351-07	CRQL Check Solid		1		03/26/09 12:20
9	EL.032609.122639	WG298351-08	CRQL Check Water		1		03/26/09 12:26
10	EL.032609.123313	WG298351-09	Interference Check		1		03/26/09 12:33
11	EL.032609.123947	WG298351-10	Interference Check		1		03/26/09 12:39
12	EL.032609.124621	WG298351-11	CCV		1		03/26/09 12:46
13	EL.032609.125252	WG298351-12	CCB		1		03/26/09 12:52
14	EL.032609.125902	L1-20	120 PPB		1		03/26/09 12:59
15	EL.032609.130853	WG298351-13	CCV		1		03/26/09 13:08
16	EL.032609.132117	WG298351-14	CCB		1		03/26/09 13:21
17	EL.032609.133150	WG298254-03	Method/Prep Blank	40/100	1		03/26/09 13:31
18	EL.032609.133801	WG298254-04	Laboratory Control S	40/100	1		03/26/09 13:38
19	EL.032609.134413	L09030548-01	OUTFALL 002/COMP	40/100	1	WG298254-01	03/26/09 13:44
20	EL.032609.135025	WG298254-05	Duplicate	40/100	1	L09030548-01	03/26/09 13:50
21	EL.032609.135637	WG298254-02	Reference Sample		1	L09030565-07	03/26/09 13:56
22	EL.032609.140250	WG298254-06	Matrix Spike	40/100	1	L09030565-07	03/26/09 14:02
23	EL.032609.140903	WG298254-07	Matrix Spike Duplica	40/100	1	L09030565-07	03/26/09 14:09
24	EL.032609.141517	L09030557-03	AV-NCB-AS-MUL-35-032409	40/100	1		03/26/09 14:15
25	EL.032609.142131	WG298309-01	Post Digestion Spike		1	L09030557-03	03/26/09 14:21
26	EL.032609.142745	WG298309-02	Serial Dilution		5	L09030557-03	03/26/09 14:27
27	EL.032609.143419	WG298351-15	CCV		1		03/26/09 14:34
28	EL.032609.144050	WG298351-16	CCB		1		03/26/09 14:40
29	EL.032609.144701	WG298238-01	Fluid Blank		1		03/26/09 14:47
30	EL.032609.145459	L09030557-05	AV-NCB-AS-MUL-36-032409	40/100	1		03/26/09 14:54
31	EL.032609.150110	L09030557-09	AV-NCB-AS-MUL-37-032409	40/100	1		03/26/09 15:01
32	EL.032609.150721	L09030565-03	AV-GW-ON-133 (032309)	40/100	1		03/26/09 15:07
33	EL.032609.151332	L09030565-05	AV-GW-ON-135 (032409)	40/100	1		03/26/09 15:13
34	EL.032609.151944	L09030557-07	AV-NCB-PE-MUL-35-C5-032	40/100	1		03/26/09 15:19
35	EL.032609.152617	WG298351-17	CCV		1		03/26/09 15:26
36	EL.032609.153248	WG298351-18	CCB		1		03/26/09 15:32
37	EL.032609.153943	WG298079-02	Method/Prep Blank	40/100	1		03/26/09 15:39

Maren Beery



Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 032609A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: _____
 Maintenance Log ID: _____

Calibration Std: STD31921 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705
 Workgroups: 298309,298163

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.032609.154555	WG298079-03	Laboratory Control S	40/100	1		03/26/09 15:45
39	EL.032609.155208	L09030466-02	MW2B-235-14	40/100	1		03/26/09 15:52
40	EL.032609.155821	WG298079-01	Reference Sample		1	L09030466-05	03/26/09 15:58
41	EL.032609.160435	WG298079-04	Matrix Spike	40/100	1	L09030466-05	03/26/09 16:04
42	EL.032609.161049	WG298079-05	Matrix Spike Duplica	40/100	1	L09030466-05	03/26/09 16:10
43	EL.032609.161703	L09030466-14	MW4B-235-14	40/100	1		03/26/09 16:17
44	EL.032609.162316	WG298163-01	Post Digestion Spike		1	L09030466-14	03/26/09 16:23
45	EL.032609.162928	WG298163-02	Serial Dilution		5	L09030466-14	03/26/09 16:29
46	EL.032609.163600	WG298351-19	CCV		1		03/26/09 16:36
47	EL.032609.164231	WG298351-20	CCB		1		03/26/09 16:42
48	EL.032609.164842	L09030466-17	MW5A-235-14	40/100	1		03/26/09 16:48
49	EL.032609.165454	L09030466-20	MW5A2-235-14	40/100	1		03/26/09 16:54
50	EL.032609.170106	L09030466-23	OW1B-235-14	40/100	1		03/26/09 17:01
51	EL.032609.170719	L09030466-26	OW2A-235-14	40/100	1		03/26/09 17:07
52	EL.032609.171332	L09030466-29	OW3A-235-14	40/100	1		03/26/09 17:13
53	EL.032609.171945	L09030487-03	AV-GW-ON-GPW03 (031909)	40/100	1		03/26/09 17:19
54	EL.032609.172559	L09030487-05	AV-GW-ON-MW12 (031909)	40/100	1		03/26/09 17:25
55	EL.032609.173213	L09030487-07	AV-GW-ON-118 (032009)	40/100	1		03/26/09 17:32
56	EL.032609.173827	L09030497-01	16WW35-031909	40/100	5		03/26/09 17:38
57	EL.032609.174501	WG298351-21	CCV		1		03/26/09 17:45
58	EL.032609.175133	WG298351-22	CCB		1		03/26/09 17:51
59	EL.032609.175745	L09030497-02	16WW24-031909		1		03/26/09 17:57
60	EL.032609.180358	L09030497-03	16WW25-031909	40/100	1		03/26/09 18:03
61	EL.032609.181010	L09030497-04	16WW23-031909		1		03/26/09 18:10
62	EL.032609.181642	WG298351-23	CCV		1		03/26/09 18:16
63	EL.032609.182313	WG298351-24	CCB		1		03/26/09 18:23

Page: 2 Approved: March 27, 2009

Maren Beery



00087503

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 032709A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: _____
 Maintenance Log ID: _____

Calibration Std: STD31921 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705
 Workgroups: 298323,298324,298163,298000,298422

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
1	EL.032709.100819	Blank	Blank		1		03/27/09 10:08
2	EL.032709.101359	WG298447-01	Calibration Point		1		03/27/09 10:13
3	EL.032709.101939	WG298447-02	Calibration Point		1		03/27/09 10:19
4	EL.032709.102521	WG298447-03	Calibration Point		1		03/27/09 10:25
5	EL.032709.103103	WG298447-04	Calibration Point		1		03/27/09 10:31
6	EL.032709.103645	WG298447-05	Initial Calibration Verification		1		03/27/09 10:36
7	EL.032709.104316	WG298447-06	Initial Calib Blank		1		03/27/09 10:43
8	EL.032709.104949	WG298447-07	CRQL Check Solid		1		03/27/09 10:49
9	EL.032709.105625	WG298447-08	CRQL Check Water		1		03/27/09 10:56
10	EL.032709.110300	WG298447-09	Interference Check		1		03/27/09 11:03
11	EL.032709.110934	WG298447-10	Interference Check		1		03/27/09 11:09
12	EL.032709.111607	WG298447-11	CCV		1		03/27/09 11:16
13	EL.032709.112239	WG298447-12	CCB		1		03/27/09 11:22
14	EL.032709.112848	WG298021-02	Method/Prep Blank	.5/200	1		03/27/09 11:28
15	EL.032709.113458	WG298021-03	Laboratory Control S	.5/200	1		03/27/09 11:34
16	EL.032709.114109	WG298021-01	Reference Sample		1	L09030467-30	03/27/09 11:41
17	EL.032709.114720	WG298021-04	Matrix Spike	.522/200	1	L09030467-30	03/27/09 11:47
18	EL.032709.115331	WG298021-05	Matrix Spike Duplica	.523/200	1	L09030467-30	03/27/09 11:53
19	EL.032709.115942	L09030467-02	CDL-BH-4-1	.517/200	1		03/27/09 11:59
20	EL.032709.120554	L09030467-04	CDL-BH-4-2	.538/200	1		03/27/09 12:05
21	EL.032709.121206	L09030467-06	CDL-BH-4-3	.501/200	1		03/27/09 12:12
22	EL.032709.121819	WG298324-01	Post Digestion Spike		1	L09030467-06	03/27/09 12:18
23	EL.032709.122432	WG298324-02	Serial Dilution		5	L09030467-06	03/27/09 12:24
24	EL.032709.123104	WG298447-13	CCV		1		03/27/09 12:31
25	EL.032709.123736	WG298447-14	CCB		1		03/27/09 12:37
26	EL.032709.124347	L09030467-08	CDL-BH-4-4	.537/200	1		03/27/09 12:43
27	EL.032709.125001	L09030467-10	CDL-BH-4-5	.511/200	1		03/27/09 12:50
28	EL.032709.125614	L09030467-12	CDL-BH-4-6	.525/200	1		03/27/09 12:56
29	EL.032709.130225	L09030467-15	CDL-BH-4-DP	.503/200	1		03/27/09 13:02
30	EL.032709.130836	L09030467-17	CDL-BH-5-1	.508/200	1		03/27/09 13:08
31	EL.032709.131448	L09030467-19	CDL-BH-5-2	.504/200	1		03/27/09 13:14
32	EL.032709.132100	L09030467-21	CDL-BH-5-3	.532/200	1		03/27/09 13:21
33	EL.032709.132712	L09030467-23	CDL-BH-5-4	.512/200	1		03/27/09 13:27
34	EL.032709.133333	L09030497-01	16WW35-031909	40/100	100		03/27/09 13:33
35	EL.032709.134007	WG298447-15	CCV		1		03/27/09 13:40
36	EL.032709.134638	WG298447-16	CCB		1		03/27/09 13:46
37	EL.032709.135248	L09030497-02	16WW24-031909	40/100	100		03/27/09 13:52

Page: 1 Approved: March 30, 2009

Maren Beery



00087504

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 032709A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: _____
 Maintenance Log ID: _____

Calibration Std: STD31921 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705
 Workgroups: 298323,298324,298163,298000,298422

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
38	EL.032709.135900	L09030497-03	16WW25-031909	40/100	100		03/27/09 13:59
39	EL.032709.140512	L09030497-04	16WW23-031909	40/100	100		03/27/09 14:05
40	EL.032709.141145	WG298447-17	CCV		1		03/27/09 14:11
41	EL.032709.141816	WG298447-18	CCB		1		03/27/09 14:18
42	EL.032709.142427	WG298324-01	Post Digestion Spike		1	L09030467-06	03/27/09 14:24
43	EL.032709.143335	L09030467-25	CDL-BH-5-5	.5/200	1		03/27/09 14:33
44	EL.032709.143948	L09030467-27	CDL-BH-5-6	.5/200	1		03/27/09 14:39
45	EL.032709.144620	WG298447-19	CCV		1		03/27/09 14:46
46	EL.032709.145252	WG298447-20	CCB		1		03/27/09 14:52
47	EL.032709.150209	WG298016-02	Method/Prep Blank	.5/200	1		03/27/09 15:02
48	EL.032709.150822	WG298016-03	Laboratory Control S	.5/200	1		03/27/09 15:08
49	EL.032709.151436	WG298016-01	Reference Sample		1	L09030480-01	03/27/09 15:14
50	EL.032709.152050	WG298016-04	Matrix Spike	.509/200	1	L09030480-01	03/27/09 15:20
51	EL.032709.152702	WG298016-05	Matrix Spike Duplica	.508/200	1	L09030480-01	03/27/09 15:27
52	EL.032709.153313	L09030448-02	CDL-BH-2-5	.513/200	1		03/27/09 15:33
53	EL.032709.153925	L09030448-04	CDL-BH-2-6	.521/200	1		03/27/09 15:39
54	EL.032709.154536	L09030448-07	CDL-BH-3-1	.534/200	1		03/27/09 15:45
55	EL.032709.155148	WG298323-01	Post Digestion Spike		1	L09030448-07	03/27/09 15:51
56	EL.032709.155800	WG298323-02	Serial Dilution		5	L09030448-07	03/27/09 15:58
57	EL.032709.160727	WG298447-21	CCV		1		03/27/09 16:07
58	EL.032709.161359	WG298447-22	CCB		1		03/27/09 16:13
59	EL.032709.162010	L09030448-09	CDL-BH-3-2	.524/200	1		03/27/09 16:20
60	EL.032709.162623	L09030448-11	CDL-BH-3-3	.508/200	1		03/27/09 16:26
61	EL.032709.163236	L09030448-13	CDL-BH-3-4	.502/200	1		03/27/09 16:32
62	EL.032709.163850	L09030448-15	CDL-BH-3-5	.516/200	1		03/27/09 16:38
63	EL.032709.164504	L09030448-17	CDL-BH-3-6	.514/200	1		03/27/09 16:45
64	EL.032709.165118	L09030448-20	CDL-BH-3-DP	.519/200	1		03/27/09 16:51
65	EL.032709.165731	L09030448-21	DDP-2-C	.519/200	1		03/27/09 16:57
66	EL.032709.170342	L09030448-29	CDL-BH-2-4	.5/200	1		03/27/09 17:03
67	EL.032709.171014	WG298447-23	CCV		1		03/27/09 17:10
68	EL.032709.171646	WG298447-24	CCB		1		03/27/09 17:16
69	EL.032709.172256	L09030463-12	DG-4	40/100	1		03/27/09 17:22
70	EL.032709.172908	L09030463-14	DG-5	40/100	1		03/27/09 17:29
71	EL.032709.173521	L09030463-16	DG-6	40/100	1		03/27/09 17:35
72	EL.032709.174133	L09030463-18	DG-7	40/100	1		03/27/09 17:41
73	EL.032709.174747	L09030463-20	UG-3	40/100	1		03/27/09 17:47
74	EL.032709.175400	L09030463-22	UG-4	40/100	1		03/27/09 17:54

Maren Beery



00087505

Microbac Laboratories Inc.

Instrument Run Log

Instrument: ELAN-ICP Dataset: 032709A.REP
 Analyst1: JYH Analyst2: N/A
 Method: 6020 SOP: ME700 Rev: _____
 Maintenance Log ID: _____

Calibration Std: STD31921 ICV/CCV Std: STD31654 Post Spike: STD27580
 ICSA: STD31706 ICSAB: STD31705
 Workgroups: 298323,298324,298163,298000,298422

Comments:

Seq.	File ID	Sample	ID	Prep	Dil	Reference	Date/Time
75	EL.032709.180014	L09030463-24	DUP	40/100	1		03/27/09 18:00
76	EL.032709.180628	L09030469-01	OUTFALL 110	40/100	5	WG297921-02	03/27/09 18:06
77	EL.032709.181242	WG297921-07	Duplicate	40/100	5	L09030469-01	03/27/09 18:12
78	EL.032709.181916	WG298447-25	CCV		1		03/27/09 18:19
79	EL.032709.182547	WG298447-26	CCB		1		03/27/09 18:25
80	EL.032709.183159	WG298356-02	Method/Prep Blank	.5/200	1		03/27/09 18:31
81	EL.032709.183813	WG298356-03	Laboratory Control S	.5/200	1		03/27/09 18:38
82	EL.032709.184424	WG298356-01	Reference Sample		1	L09030592-06	03/27/09 18:44
83	EL.032709.185036	WG298356-04	Matrix Spike	.513/200	1	L09030592-06	03/27/09 18:50
84	EL.032709.185649	WG298356-05	Matrix Spike Duplica	.513/200	1	L09030592-06	03/27/09 18:56
85	EL.032709.190302	L09030592-01	EVBS1139D001	.512/200	1		03/27/09 19:03
86	EL.032709.190915	L09030592-02	EVBS1139S001	.5/200	1		03/27/09 19:09
87	EL.032709.191529	WG298422-01	Post Digestion Spike		1	L09030592-02	03/27/09 19:15
88	EL.032709.192143	WG298422-02	Serial Dilution		5	L09030592-02	03/27/09 19:21
89	EL.032709.192817	WG298447-27	CCV		1		03/27/09 19:28
90	EL.032709.193449	WG298447-28	CCB		1		03/27/09 19:34
91	EL.032709.194101	L09030592-03	EVBS1144S001	.519/200	1		03/27/09 19:41
92	EL.032709.194716	L09030592-04	EVBS1144S002	.509/200	1		03/27/09 19:47
93	EL.032709.195331	L09030592-05	EVBS1146S001	.503/200	1		03/27/09 19:53
94	EL.032709.195946	L09030579-14	11IDW01	.531/200	1	WG298475-01	03/27/09 19:59
95	EL.032709.200600	L09030579-14	11IDW01		50	WG298475-01	03/27/09 20:06
96	EL.032709.201233	WG298447-29	Interference Check		1		03/27/09 20:12
97	EL.032709.201907	WG298447-30	Interference Check		1		03/27/09 20:19
98	EL.032709.202541	WG298447-31	CCV		1		03/27/09 20:25
99	EL.032709.203213	WG298447-32	CCB		1		03/27/09 20:32

Page: 3 Approved: March 30, 2009

Maren Beery



Microbac Laboratories Inc.

Data Checklist

Date: 26-MAR-2009

Analyst: JYH

Analyst: NA

Method: 6020

Instrument: ELAN

Curve Workgroup: 298351

Runlog ID: 27256

Analytical Workgroups: 298309,298163

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	548,557,565,466,487,497
Client Forms	X
Level X	
Level 3	
Level 4	548,557,565,466,487,497
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:

Secondary Reviewer:
27-MAR-2009

Microbac Laboratories Inc.

Data Checklist

Date: 27-MAR-2009

Analyst: JYH

Analyst: NA

Method: 6020

Instrument: ELAN

Curve Workgroup: 298447

Runlog ID: 27263

Analytical Workgroups: 298323,298324,298163,298000,298422

Calibration/Linearity	X
ICV/CCV	X
ICB/CCB	X
ICSA/ICSAB	X
CRI	X
Blank/LCS	X
MS/MSD	X
Post Spike/Serial Dilution	X
Upload Results	X
Data Qualifiers	X
Generate PDF Instrument Data	X
Sign/Annotate PDF Data	X
Upload Curve Data	X
Workgroup Forms	
Case Narrative	467,497,448,480,463,469,579,592
Client Forms	X
Level X	
Level 3	497
Level 4	467,448,463,579,592
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Primary Reviewer	JYH
Secondary Reviewer	MMB
Comments	

Primary Reviewer:

Secondary Reviewer:
30-MAR-2009

Analytical Method:6020

AAB#:WG298163

Login Number:L09030497

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW25-031909	03/19/09	03/24/09	03/24/09	180	4.84	03/27/09	180	3.05	
16WW35-031909	03/19/09	03/24/09	03/24/09	180	5.15	03/26/09	180	2.20	
16WW35-031909	03/19/09	03/24/09	03/24/09	180	5.15	03/27/09	180	3.03	
16WW23-031909	03/19/09	03/24/09	03/24/09	180	4.97	03/27/09	180	3.05	
16WW25-031909	03/19/09	03/24/09	03/24/09	180	4.84	03/26/09	180	2.22	
16WW24-031909	03/19/09	03/24/09	03/24/09	180	5.05	03/27/09	180	3.04	

* EXT = SEE PROJECT QAPP REQUIREMENTS

*ANAL = SEE PROJECT QAPP REQUIREMENTS

METHOD BLANK SUMMARY

Login Number: <u>L09030497</u>	Work Group: <u>WG298163</u>
Blank File ID: <u>EL.032609.153943</u>	Blank Sample ID: <u>WG298079-02</u>
Prep Date: <u>03/24/09 12:48</u>	Instrument ID: <u>ELAN-ICP</u>
Analyzed Date: <u>03/26/09 15:39</u>	Method: <u>6020</u>
Analyst: <u>JYH</u>	

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298079-03	EL.032609.154555	03/26/09 15:45	01
16WW35-031909	L09030497-01	EL.032609.173827	03/26/09 17:38	DL01
16WW25-031909	L09030497-03	EL.032609.180358	03/26/09 18:03	01
16WW35-031909	L09030497-01	EL.032709.133333	03/27/09 13:33	DL02
16WW24-031909	L09030497-02	EL.032709.135248	03/27/09 13:52	DL01
16WW25-031909	L09030497-03	EL.032709.135900	03/27/09 13:59	DL01
16WW23-031909	L09030497-04	EL.032709.140512	03/27/09 14:05	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1351719
 Report generated 03/27/2009 14:28



Login Number: L09030497 Prep Date: 03/24/09 12:48 Sample ID: WG298079-02
Instrument ID: ELAN-ICP Run Date: 03/26/09 15:39 Prep Method: 3015
File ID: EL.032609.153943 Analyst: JYH Method: 6020
Workgroup (AAB#): WG298163 Matrix: Water Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: ELAN-I - 26-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Arsenic, Total	0.000250	0.00100	0.000250	1	U
Chromium, Total	0.000500	0.00200	0.000500	1	U
Manganese, Total	0.000500	0.00200	0.000500	1	U

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1351720
27-MAR-2009 14:28



Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298079-03
Instrument ID: ELAN-ICP Run Time: 15:45 Prep Method: 3015
File ID: EL.032609.154555 Analyst: JYH Method: 6020
Workgroup (AAB#): WG298163 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD30482 Cal ID: ELAN-I - 26-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits	Q
Arsenic, Total	0.0625	0.0624	99.9	80 - 120	
Chromium, Total	0.0625	0.0625	100	80 - 120	
Manganese, Total	0.0625	0.0618	98.9	80 - 120	

LCS - Modified 03/06/2008
PDF File ID: 1351721
Report generated: 03/27/2009 14:28



Loginnum: L09030497 Cal ID: ELAN-ICP - Worknum: WG298163
 Instrument ID: ELAN-ICP Contract #: DACA56-94-D-0020 Method: 6020
 Parent ID: WG298079-01 File ID: EL.032609.155821 Dil: 1 Matrix: WATER
 Sample ID: WG298079-04 MS File ID: EL.032609.160435 Dil: 1 Units: mg/L
 Sample ID: WG298079-05 MSD File ID: EL.032609.161049 Dil: 1

Analyte	Parent	MS Spiked	MS Found	MS %Rec	MSD Spiked	MSD Found	MSD %Rec	%RPD	%Rec Limits	RPD Limit	Q
Arsenic	ND	0.0625	0.0622	99.5	0.0625	0.0603	96.5	3.04	75 - 125	20	
Chromium	0.00173	0.0625	0.0706	110	0.0625	0.0698	109	1.26	75 - 125	20	
Manganese	0.0221	0.0625	0.0894	108	0.0625	0.0872	104	2.51	75 - 125	20	

* FAILS %REC LIMIT

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Microbac Laboratories Inc.
Serial Dilution Report

Login: L09030497 Worknum: WG298163
Instrument: ELAN-ICP Method: 6020
Serial Dil: WG298163-02 File ID: EL.032609.162928 Dil: 5 Units: ug/L
Sample: L09030466-14 File ID: EL.032609.161703 Dil: 1

Analyte	Sample	Qual	Serial Dil	Qual	% Diff	Q
Arsenic	30.4		34.7		14.10	E
Chromium	4.29	X	4.57	X	6.53	
Manganese	90.2		95.5		5.88	

U = Result is below MDL.

F = Result is greater than or equal to MDL and less than the RL.

X = Result is greater than or equal to RL and less than 100 times the MDL.

E = %D exceeds control limit of 10% and initial sample result is greater than or equal to 100 times the MDL.

SERIAL_DIL - Modified 09/22/2008

PDF File ID: 1351716

03/27/2009 14:28



Sample Login ID: L09030497

Worknum: WG298163

Instrument ID: ELAN-ICP

Method: 6020

Post Spike ID: WG298163-01

File ID: EL.032609.162316

Dil: 1

Units: ug/L

Sample ID: L09030466-14

File ID: EL.032609.161703

Dil: 1

Matrix: Water

Analyte	Post Spike Result	C	Sample Result	C	Spike Added(SA)	% R	Control Limit %R	Q
ARSENIC	79.0		30.4		50	97.2	75 - 125	
CHROMIUM	57.1		4.29		50	105.6	75 - 125	
MANGANESE	115		90.2		50	49.6	75 - 125	N

N = % Recovery exceeds control limits

F = Result is between MDL and RL

U = Sample result is below MDL. A value of zero is used in the calculation

Login: L09030497 Workgroup (AAB#): WG298163
Analytical Method: 6020 Instrument ID: ELAN-ICP
ICAL Worknum: WG298351 Initial Calibration Date: 26-MAR-2009 12:01

	WG298351-01		WG298351-02		WG298351-03		WG298351-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ARSENIC	0	-288	.4	452	50	101000	100	203000	.999963	
CHROMIUM	0	15200	.4	20000	50	608000	100	1250000	.999929	
MANGANESE	0	496	.4	7640	50	930000	100	1880000	.999999	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

Login: L09030497 Workgroup (AAB#): WG298163
Analytical Method: 6020 Instrument ID: ELAN-ICP
ICAL Worknum: WG298447 Initial Calibration Date: 27-MAR-2009 10:31

	WG298447-01		WG298447-02		WG298447-03		WG298447-04			
	Conc	INT	Conc	INT	Conc	INT	Conc	INT	R	Q
ARSENIC	0	-338	.4	351	50	87600	100	176000	.999971	
CHROMIUM	0	15400	.4	19300	50	532000	100	1050000	.999973	
MANGANESE	0	585	.4	7370	50	814000	100	1630000	.999957	

INT = Instrument intensity
R = Coefficient of correlation
Q = Data Qualifier
* = Out of Compliance; R < 0.995

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-06
Instrument ID: ELAN-ICP Run Time: 12:13 Method: 6020
File ID: EL.032609.121330 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-ICP - 26-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ARSENIC	.1	.4	.1	U
CHROMIUM	.2	.8	.2	U
MANGANESE	.2	.8	.2	U

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-06
Instrument ID: ELAN-ICP Run Time: 10:43 Method: 6020
File ID: EL.032709.104316 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-ICP - 27-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
ARSENIC	.1	.4	.1	U
CHROMIUM	.2	.8	.2	U
MANGANESE	.2	.8	.2	U

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-12
Instrument ID: ELAN-ICP Run Time: 12:52 Method: 6020
File ID: EL.032609.125252 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-18
Instrument ID: ELAN-ICP Run Time: 15:32 Method: 6020
File ID: EL.032609.153248 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.104	F
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-20
Instrument ID: ELAN-ICP Run Time: 16:42 Method: 6020
File ID: EL.032609.164231 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-22
Instrument ID: ELAN-ICP Run Time: 17:51 Method: 6020
File ID: EL.032609.175133 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-24
Instrument ID: ELAN-ICP Run Time: 18:23 Method: 6020
File ID: EL.032609.182313 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-12
Instrument ID: ELAN-ICP Run Time: 11:22 Method: 6020
File ID: EL.032709.112239 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-14
Instrument ID: ELAN-ICP Run Time: 12:37 Method: 6020
File ID: EL.032709.123736 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-16
Instrument ID: ELAN-ICP Run Time: 13:46 Method: 6020
File ID: EL.032709.134638 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-18
Instrument ID: ELAN-ICP Run Time: 14:18 Method: 6020
File ID: EL.032709.141816 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Arsenic	0.100	0.400	0.100	U
Chromium	0.200	0.800	0.200	U
Manganese	0.200	0.800	0.200	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-05
Instrument ID: ELAN-ICP Run Time: 12:06 Method: 6020
File ID: EL.032609.120659 Analyst: JYH Units: ug/L
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Arsenic	50	48.2	96.4	90 - 110	
Chromium	50	53.0	106	90 - 110	
Manganese	50	52.0	104	90 - 110	

* Exceeds LIMITS Limit

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-05
 Instrument ID: ELAN-ICP Run Time: 10:36 Method: 6020
 File ID: EL.032709.103645 Analyst: JYH Units: ug/L
 Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
 QC Key: STD

Analyte	Expected	Found	%REC	LIMITS	Q
Arsenic	50	47.8	95.6	90 - 110	
Chromium	50	50.3	101	90 - 110	
Manganese	50	50.6	101	90 - 110	

* Exceeds LIMITS Limit

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-11
Instrument ID: ELAN-ICP Run Time: 12:46 Method: 6020
File ID: EL.032609.124621 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic		50.0	49.1	ug/L	98.2	90 - 110		
Chromium		50.0	51.7	ug/L	103	90 - 110		
Manganese		50.0	52.0	ug/L	104	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-17
Instrument ID: ELAN-ICP Run Time: 15:26 Method: 6020
File ID: EL.032609.152617 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic	50.0	48.7	ug/L	97.3	90 - 110		
Chromium	50.0	52.3	ug/L	105	90 - 110		
Manganese	50.0	53.1	ug/L	106	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-19
Instrument ID: ELAN-ICP Run Time: 16:36 Method: 6020
File ID: EL.032609.163600 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic	50.0	48.4	ug/L	96.8	90 - 110		
Chromium	50.0	49.8	ug/L	99.7	90 - 110		
Manganese	50.0	50.2	ug/L	100	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-21
Instrument ID: ELAN-ICP Run Time: 17:45 Method: 6020
File ID: EL.032609.174501 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic		50.0	49.3	ug/L	98.5	90 - 110		
Chromium		50.0	49.0	ug/L	97.9	90 - 110		
Manganese		50.0	49.5	ug/L	99.1	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/26/2009 Sample ID: WG298351-23
Instrument ID: ELAN-ICP Run Time: 18:16 Method: 6020
File ID: EL.032609.181642 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 26-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic	50.0	48.8	ug/L	97.6	90 - 110		
Chromium	50.0	49.4	ug/L	98.8	90 - 110		
Manganese	50.0	50.5	ug/L	101	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-11
Instrument ID: ELAN-ICP Run Time: 11:16 Method: 6020
File ID: EL.032709.111607 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic		50.0	49.0	ug/L	98.1	90 - 110		
Chromium		50.0	52.7	ug/L	105	90 - 110		
Manganese		50.0	52.1	ug/L	104	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-13
Instrument ID: ELAN-ICP Run Time: 12:31 Method: 6020
File ID: EL.032709.123104 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic	50.0	49.4	ug/L	98.8	90 - 110		
Chromium	50.0	52.1	ug/L	104	90 - 110		
Manganese	50.0	52.2	ug/L	104	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-15
Instrument ID: ELAN-ICP Run Time: 13:40 Method: 6020
File ID: EL.032709.134007 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic	50.0	50.0	ug/L	99.9	90 - 110		
Chromium	50.0	53.7	ug/L	107	90 - 110		
Manganese	50.0	52.4	ug/L	105	90 - 110		

* Exceeds LIMITS Criteria

Login Number: L09030497 Run Date: 03/27/2009 Sample ID: WG298447-17
Instrument ID: ELAN-ICP Run Time: 14:11 Method: 6020
File ID: EL.032709.141145 Analyst: JYH QC Key: STD
Workgroup (AAB#): WG298163 Cal ID: ELAN-I - 27-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	%REC	LIMITS		Q
Arsenic	50.0	48.8	ug/L	97.5	90 - 110		
Chromium	50.0	52.6	ug/L	105	90 - 110		
Manganese	50.0	52.9	ug/L	106	90 - 110		

* Exceeds LIMITS Criteria

Login number: L09030497
Instrument ID: ELAN-ICP
Sol. A : WG298351-09
Sol. AB : WG298351-10

File ID: EL.032609.123313
File ID: EL.032609.123947

Workgroup (AAB#): WG298163
Method: 6020
Units: ug/L
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Arsenic	NS	-0.0445	NS	100	105	105	
Chromium	NS	0.360	NS	100	100	100	
Manganese	NS	0.379	NS	100	99.7	99.7	

NS = Not spiked

* = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.

= Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

Login number: L09030497
Instrument ID: ELAN-ICP
Sol. A : WG298447-09
Sol. AB : WG298447-10

File ID: EL.032709.110300
File ID: EL.032709.110934

Workgroup (AAB#): WG298163
Method: 6020
Units: ug/L
Matrix: Water

ANALYTE	Sol. A			Sol. AB			Q
	True	Found	%Recovery	True	Found	%Recovery	
Arsenic	NS	0.0435	NS	100	107	107	
Chromium	NS	0.255	NS	100	103	103	
Manganese	NS	0.346	NS	100	104	104	

NS = Not spiked

* = Recovery of spiked element is outside acceptance limit of 80% - 120% of true value.

= Result for unspiked element is outside the acceptance limits of (+/-) the project reporting limit (RL).

INTERNAL STANDARD REPORT

Login: L09030497 Analytical Method: 6020
 Analytical Workgroup: WG298163 Matrix: 1
 Instrument: ELAN-ICP Analyst: JYH
 ICAL Date: 26-MAR-2009 11:44

Sample	Type	Run Date	BISMUTH	GERMANIUM	INDIUM	TERBIUM
			% Rec	% Rec	% Rec	% Rec
L09030466-14	SAMP	26-MAR-2009 16:17	101.92	103.274	103.736	102.787
L09030497-01	SAMP	26-MAR-2009 17:38	77.848	78.949	76.049	83.904
L09030497-03	SAMP	26-MAR-2009 18:03	84.027	85.745	83.767	90.576
WG298079-01	REF	26-MAR-2009 15:58	102.184	103.411	104.044	104.583
WG298079-02	BLANK	26-MAR-2009 15:39	99.061	98.663	96.44	98.617
WG298079-03	LCS	26-MAR-2009 15:45	100.848	99.662	98.257	100.419
WG298079-04	MS	26-MAR-2009 16:04	101.826	102.308	104.367	103.748
WG298079-05	MSD	26-MAR-2009 16:10	101.762	102.557	102.928	103.386
WG298163-01	PSPK	26-MAR-2009 16:23	102.014	102.547	102.322	103.033
WG298163-02	SERIAL	26-MAR-2009 16:29	101.196	100.306	99.743	99.76
WG298351-05	ICV	26-MAR-2009 12:06	100.01	108.244	107.783	105.135
WG298351-06	ICB	26-MAR-2009 12:13	99.31	104.47	102.749	102.487
WG298351-11	CCV	26-MAR-2009 12:46	101.923	105.309	104.559	104.859
WG298351-12	CCB	26-MAR-2009 12:52	94.705	101.04	99.517	99.257
WG298351-17	CCV	26-MAR-2009 15:26	97.184	99.136	100.385	100.279
WG298351-18	CCB	26-MAR-2009 15:32	97.698	97.989	95.953	96.8
WG298351-19	CCV	26-MAR-2009 16:36	98.697	105.355	102.726	102.321
WG298351-20	CCB	26-MAR-2009 16:42	99.74	98.984	96.879	99.933
WG298351-21	CCV	26-MAR-2009 17:45	100.182	95.396	93.948	97.556
WG298351-22	CCB	26-MAR-2009 17:51	100.649	95.066	91.916	97.582
WG298351-23	CCV	26-MAR-2009 18:16	102.52	100.925	98.836	101.939
WG298351-24	CCB	26-MAR-2009 18:23	104.538	98.925	96.229	99.867

Acceptance criteria: 30% - 120%
 Underlined recoveries are out of range

INT_STD_ICPMS - Modified 03/05/2008
 PDF File ID: 1351725
 Report generated: 03/27/2009 14:28



INTERNAL STANDARD REPORT

Login: L09030497 Analytical Method: 6020
 Analytical Workgroup: WG298163 Matrix: 1
 Instrument: ELAN-ICP Analyst: JYH
 ICAL Date: 27-MAR-2009 10:13

Sample	Type	Run Date	BISMUTH	GERMANIUM	INDIUM	TERBIUM
			% Rec	% Rec	% Rec	% Rec
L09030497-01	SAMP	27-MAR-2009 13:33	92.761	109.525	103.522	100.412
L09030497-02	SAMP	27-MAR-2009 13:52	95.405	107.581	103.124	99.631
L09030497-03	SAMP	27-MAR-2009 13:59	97.799	109.391	105.918	101.388
L09030497-04	SAMP	27-MAR-2009 14:05	96.621	108.409	104.508	100.983
WG298447-05	ICV	27-MAR-2009 10:36	102.402	104.458	103.906	105.458
WG298447-06	ICB	27-MAR-2009 10:43	99.972	100.301	97.901	99.839
WG298447-11	CCV	27-MAR-2009 11:16	98.489	101.025	99.698	100.558
WG298447-12	CCB	27-MAR-2009 11:22	101.968	100.547	100.268	101.962
WG298447-13	CCV	27-MAR-2009 12:31	96.765	107.578	105.088	100.972
WG298447-14	CCB	27-MAR-2009 12:37	98.919	107.638	102.406	101.764
WG298447-15	CCV	27-MAR-2009 13:40	94.089	109.858	105.441	103.054
WG298447-16	CCB	27-MAR-2009 13:46	95.627	106.373	103.536	100.015
WG298447-17	CCV	27-MAR-2009 14:11	94.777	109.521	104.856	103.286
WG298447-18	CCB	27-MAR-2009 14:18	95.755	106.323	104.937	102.383

Acceptance criteria: 30% - 120%
 Underlined recoveries are out of range

INT_STD_ICPMS - Modified 03/05/2008
 PDF File ID: 1351725
 Report generated: 03/27/2009 14:28



Login Number: L09030497

Date: 01/03/2009

Instrument ID: ELAN-ICP

Method: 6020

Analyte	Integration Time (Sec.)	Concentration (ug/L)
Antimony	1.00	100.0
Arsenic	1.00	100.0
Barium	1.00	100.0
Cadmium	1.00	100.0
Chromium	1.00	100.0
Cobalt	1.00	100.0
Copper	1.00	100.0
Lead	1.00	100.0
Manganese	1.00	100.0
Nickel	1.00	100.0
Selenium	1.00	100.0
Silver	1.00	100.0
Thallium	1.00	100.0
Vanadium	1.00	100.0
Zinc	1.00	100.0

Comments:

All analytes passed acceptance criteria at the specified concentration.

2.3 General Chemistry Data

2.3.1 Method 9056

2.3.1.1 Summary Data

LABORATORY REPORT

00087547

L09030497

04/01/09 10:22

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta , OH 45750
(740) 373 - 4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025

Project: Longhorn AAP

Site: LHAAP-16

P.O. Number: 389869/ 390836 (GWTP)

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
16WW35-031909	L09030497-01	300.0	100	24-MAR-09
16WW24-031909	L09030497-02	300.0	10	24-MAR-09



Sample Number: **L09030497-01**
Client ID: **16WW35-031909**
Matrix: **Water**
Workgroup Number: **WG298116**
Collect Date: **03/19/2009 09:10**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **100**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/24/2009 16:27**
Cal Date: **10/29/2008 15:17**
Run Date: **03/24/2009 17:36**
File ID: **I20324091736.07**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	648		20.0	10.0

Report Number: **L09030497**Report Date : **April 1, 2009**

00087549

Sample Number: **L09030497-02**
Client ID: **16WW24-031909**
Matrix: **Water**
Workgroup Number: **WG298116**
Collect Date: **03/19/2009 11:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **10**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/24/2009 16:27**
Cal Date: **10/29/2008 15:17**
Run Date: **03/24/2009 17:54**
File ID: **I20324091754.08**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	347		2.00	1.00

2.3.1.2 QC Summary Data

The concentrations (ppm) of the calibration standards and the resulting area counts are used to determine the equation of a linear or quadratic plot.

The slope and y-intercept of that line are used to calculate the quantity of the analyzed unknown samples.

$\text{Amount(ppm)} = [(\text{slope})(\text{area count of unknown}) + \text{y-intercept}](\text{dilution})$

(The slope is the amt/area also identified as the CF or calibration factor)

00087552

Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 102908 HICAL IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 8

Maintenance Log ID: 26395

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG286387 (ICAL) WG286492
 Internal STD: NA Surrogate STD: NA Calibration STD: STD29498

Comments: Samples 0005-01 (MDL-Q) and 0006-01 (MDL-Q) were analyzed at two different levels of concentration each. One level is equal to the RL's for F, Cl, Br, SO₄, whereas the other level is nearest to the RL's for NO₂-N, NO₃-N, and PO₄-P.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I21029081332.01	WG286387-01 STD #1	1	1		10/29/08 13:32
2	I21029081350.02	WG286387-02 STD #2	1	1		10/29/08 13:50
3	I21029081407.03	WG286387-03 STD #3	1	1		10/29/08 14:07
4	I21029081424.04	WG286387-04 STD #4	1	1		10/29/08 14:24
5	I21029081442.05	WG286387-05 STD #5	1	1		10/29/08 14:42
6	I21029081459.06	WG286387-06 STD #6	1	1		10/29/08 14:59
7	I21029081517.07	WG286387-07 STD #7	1	1		10/29/08 15:17
8	I21029081534.08	WG286387-08 ALT STD	1	1		10/29/08 15:34
9	I21029081551.09	ELUENT	1	1		10/29/08 15:51
10	I21029081609.10	DI WATER	1	1		10/29/08 16:09
11	I21029081626.11	WG286496-01 ANION CCV	1	1		10/29/08 16:26
12	I21029081644.12	WG286496-02 ANION CCB	1	1		10/29/08 16:44
13	I21029081701.13	WG286492-01 ANION BLANK	1	1		10/29/08 17:01
14	I21029081718.14	WG286492-02 ANION LCS	1	1		10/29/08 17:18
15	I21029081736.15	L08100005-01 MDL (F, Cl, Br, SO ₄)	1	1		10/29/08 17:36
16	I21029081753.16	L08100006-01 MDL (F, Cl, Br, SO ₄)	1	1		10/29/08 17:53
17	I21029081811.17	L08100005-01 MDL (NO ₂ , NO ₃ , PO ₄)	1	1		10/29/08 18:11
18	I21029081828.18	L08100006-01 MDL (NO ₂ , NO ₃ , PO ₄)	1	1		10/29/08 18:28
19	I21029081846.19	Test (Level #5) CCV	1	1		10/29/08 18:46
20	I21029081903.20	Test (Level #5) CCV	1	1		10/29/08 19:03
21	I21029081920.21	WG286496-03 ANION CCV	1	1		10/29/08 19:20
22	I21029081938.22	WG286496-04 ANION CCB	1	1		10/29/08 19:38
23	I21029081955.23	END	1	1		10/29/08 19:55

Comments

Seq.	Rerun	Dil.	Reason	Analytes



Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 032409 IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 9

Maintenance Log ID: 28101

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG298116
 Internal STD: NA Surrogate STD: NA Calibration STD: NA

Comments: Samples 497-01 and 02 were analyzed at dilutions only, due to their high "pre-run" screen results for SO4, which were greater than 200 ppm.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I20324091552.01	ELUENT	1	1		03/24/09 15:52
2	I20324091609.02	DI WATER	1	1		03/24/09 16:09
3	I20324091627.03	WG298117-01 ANION CCV	1	1		03/24/09 16:27
4	I20324091644.04	WG298117-02 ANION CCB	1	1		03/24/09 16:44
5	I20324091701.05	WG298116-01 ANION BLANK	1	1		03/24/09 17:01
6	I20324091719.06	WG298116-02 ANION LCS	1	1		03/24/09 17:19
7	I20324091736.07	L09030497-01 (CL) 1/100	1	100		03/24/09 17:36
8	I20324091754.08	L09030497-02 (CL) 1/10	1	10		03/24/09 17:54
9	I20324091811.09	DI WATER	1	1		03/24/09 18:11
10	I20324091828.10	L09030515-01 (CL,NO2,NO3,SO4) REF	1	1		03/24/09 18:28
11	I20324091846.11	WG298116-04 DUP 0515-01	1	1		03/24/09 18:46
12	I20324091903.12	WG298116-05 MS 0515-01	1	1		03/24/09 19:03
13	I20324091921.13	WG298116-06 MSD 0515-01	1	1		03/24/09 19:21
14	I20324091938.14	L09030515-01 RR CL 1/4	1	4		03/24/09 19:38
15	I20324091956.15	WG298117-03 ANION CCV	1	1		03/24/09 19:56
16	I20324092013.16	WG298117-04 ANION CCB	1	1		03/24/09 20:13
17	I20324092030.17	L09030515-03 (CL,NO2,NO3,SO4)	1	1		03/24/09 20:30
18	I20324092048.18	L09030515-03 RR CL 1/4	1	4		03/24/09 20:48
19	I20324092105.19	L09030515-05 (CL,NO2,NO3,SO4)	1	1		03/24/09 21:05
20	I20324092123.20	L09030515-05 RR CL 1/5	1	5		03/24/09 21:23
21	I20324092140.21	L09030515-07 (CL,NO2,NO3,SO4)	1	1		03/24/09 21:40
22	I20324092157.22	L09030515-09 (CL,NO2,NO3,SO4)	1	1		03/24/09 21:57
23	I20324092215.23	WG298117-05 ANION CCV	1	1		03/24/09 22:15
24	I20324092232.24	WG298117-06 ANION CCB	1	1		03/24/09 22:32
25	I20324092250.25	END	1	1		03/24/09 22:50

Comments

Seq.	Rerun	Dil.	Reason	Analytes



Microbac Laboratories Inc.

Data Checklist

Date: 29-OCT-2008

Analyst: JWR

Analyst: NA

Method: 300/9056

Instrument: IC2

Curve Workgroup: WG286387

Runlog ID: 24978

Analytical Workgroups: 10-0005 (MDL-Q), 0006 (MDL-Q)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	X
Project/client specific requirements	NA
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
30-OCT-2008

John Richards

Secondary Reviewer:
03-NOV-2008

Michael Cohen

Microbac Laboratories Inc.

Data Checklist

Date: 24-MAR-2009

Analyst: JWR

Analyst: NA

Method: 300/9056

Instrument: IC2

Curve Workgroup: NA

Runlog ID: 27218

Analytical Workgroups: L09030497, L09030515

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual Integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	ECL

Primary Reviewer:
25-MAR-2009

John Richards

Secondary Reviewer:
25-MAR-2009

Eric C. Zimm

Analytical Method: 300.0

AAB#: WG298116

Login Number: L09030497

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW24-031909	03/19/09	03/24/09	03/24/09	28	5.21	03/24/09	28	0.0604	
16WW35-031909	03/19/09	03/24/09	03/24/09	28	5.30	03/24/09	28	0.0479	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

METHOD BLANK SUMMARY

Login Number: L09030497
 Blank File ID: I20324091701.05
 Prep Date: 03/24/09 16:27
 Analyzed Date: 03/24/09 17:01
 Analyst: JWR

Work Group: WG298116
 Blank Sample ID: WG298116-01
 Instrument ID: IC2
 Method: 300.0

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298116-02	I20324091719.06	03/24/09 17:19	01
16WW35-031909	L09030497-01	I20324091736.07	03/24/09 17:36	DL01
16WW24-031909	L09030497-02	I20324091754.08	03/24/09 17:54	DL01
DUP	WG298116-04	I20324091846.11	03/24/09 18:46	01

Report Name: BLANK_SUMMARY
 PDF File ID: 1350348
 Report generated 03/26/2009 09:50



Login Number: L09030497 Prep Date: 03/24/09 16:27 Sample ID: WG298116-01
Instrument ID: IC2 Run Date: 03/24/09 17:01 Prep Method: 300.0
File ID: I20324091701.05 Analyst: JWR Method: 300.0
Workgroup (AAB#): WG298116 Matrix: Water Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: IC2 - 29-OCT-08

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Chloride	0.100	0.200	0.100	1	U

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1350349
26-MAR-2009 09:50



Login Number: L09030497 Run Date: 03/24/2009 Sample ID: WG298116-02
Instrument ID: IC2 Run Time: 17:19 Prep Method: 300.0
File ID: I20324091719.06 Analyst: JWR Method: 300.0
Workgroup (AAB#): WG298116 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD29498 Cal ID: IC2 - 29-OCT-08

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	6.00	6.05	101	90 - 110	

Login Number: L09030497
Analytical Method: 300.0
ICAL Workgroup: WG286387

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Chloride		8.478	9.08		0.99900

R = Correlation coefficient; 0.995 minimum

R² = Coefficient of determination; 0.99 minimum

This method always uses quadratic calibration model (R²)

Login Number: L09030497
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-01			WG286387-02			WG286387-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	0.200	0.0220000000 0	9.091	2.00	0.2220000000	9.009	4.00	0.4540000000	8.811

INT_CAL - Modified 03/06/2008
PDF File ID: 1350869
Report generated 03/26/2009 09:50



Login Number: L09030497
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-04			WG286387-05			WG286387-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	6.00	0.695000000	8.633	8.00	0.944000000	8.475	12.0	1.45300000	8.259

INT_CAL - Modified 03/06/2008
PDF File ID: 1350869
Report generated 03/26/2009 09:50



Login Number: L09030497
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-07		
	CONC	RESP	RF
Chloride	48.0	6.79200000	7.067

INT_CAL - Modified 03/06/2008
PDF File ID: 1350869
Report generated 03/26/2009 09:50



Login Number: L09030497 Run Date: 10/29/2008 Sample ID: WG286387-08
Instrument ID: IC2 Run Time: 15:34 Method: 300.0
File ID: I21029081534.08 Analyst: JWR QC Key: STD
ICal Workgroup: WG286387 Cal ID: IC2 - 29-OCT-08

Analyte	Expected	Found	Units	RF	%D	UCL	Q
Chloride	6.00	6.16	mg/L	8.34	2.70	10	

* Exceeds %D Limit

Login Number: L09030497 Run Date: 03/24/2009 Sample ID: WG298117-02
Instrument ID: IC2 Run Time: 16:44 Method: 300.0
File ID: I20324091644.04 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298116 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/24/2009 Sample ID: WG298117-04
Instrument ID: IC2 Run Time: 20:13 Method: 300.0
File ID: I20324092013.16 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298116 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030497 Run Date: 03/24/2009 Sample ID: WG298117-01
Instrument ID: IC2 Run Time: 16:27 Method: 300.0
File ID: I20324091627.03 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298116 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.06	mg/L	8.49	1.00	10	

* Exceeds %D Criteria

Login Number: L09030497 Run Date: 03/24/2009 Sample ID: WG298117-03
Instrument ID: IC2 Run Time: 19:56 Method: 300.0
File ID: I20324091956.15 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298116 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.05	mg/L	8.50	0.850	10	

* Exceeds %D Criteria

3.0 Attachments

Microbac Laboratories Inc.
Analyst Listing
April 1, 2009

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
AM - ALISON J. MILLER	AML - ANTHONY M. LONG	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS	CAH - CHARLES A. HALL
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CSH - CHRIS S. HILL
CTB - CHRIS T. BUCINA	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	ECL - ERIC C. LAWSON	EDA - ERIN D. AGEES
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON
JKP - JACQUELINE K. PARSONS	JKT - JANE K. THOMPSON	JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES	JYH - JI Y. HU	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LHT - LANCE H. THOMPSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MICHAEL D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	NPM - NATHANIEL P. MILLER
PDM - PIERCE D. MORRIS	RAH - ROY A. HALSTEAD	RB - ROBERT BUCHANAN
REK - ROBERT E. KYER	RLK - ROBIN L. KLINGER	RWC - RODNEY W. CAMPBELL
SAV - SARAH A. VANDENBERG	SDH - SHANA D. HINYARD	SDL - SHELLY D. LENT
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	TDH - TRICIA D. HUCK
TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WTD - WADE T. DELONG	

List of Valid Qualifiers

April 01, 2009

Qualifier: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria fail. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Undetected; the concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

***Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.



00087572

NO. 5816



Shaw Shaw Environmental & Infrastructure, Inc.
 3010 Briarpark Drive, Suite 400
 Houston, TX 77042
 (713) 996-4400

Chain of Custody

Laboratory Name: MICROBAC LABS		Address: 158 Starlite Drive Morrison, Ohio		Contact: Stephanie Mossburg (740) 373-4071												
Project Name: Longhorn AAP		Project Location: Karnack, Texas		Analysis and Method Desired (Indicate separate containers)												
Project No. 117591.00058004		Project Contact: Praveen Srivastav		Project Telephone No.: (713) 996-4588												
Point of Contact: Jennifer Hoang		Project Manager/Supervisor: Praveen Srivastav		Remarks: TRIP BLANK INCLUDED												
Telephone No.: (713) 996-4408																
Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location	Number of Containers	VOCs	Chloride	Manganese	Arsenic	Chromium			
1	16WW35-031909	3/19/09	9:10		X	N	SITE 16	5	X	X	X	X				Mn + As in same bottle
2	16WW24-031909	3/19/09	11:30		X	N	SITE 16	5	X	X			X			
3	16WW25-031909	3/19/09	16:35		X	W	SITE 16	1			X	X				Mn + As in same bottle
4	16WW23-031909	3/19/09	13:35		X	W	SITE 16	1			X					
5																
6																
7																
8																
9																
10																
Transfers Relinquished By (signature)		Date/Time		Transfers Accepted By (signature)		Date/Time		Special Instructions								
<i>M. J. Hoang</i>		3/23/09 17:30		<i>Praveen Srivastav</i>		3/24/09 9:20		* 3-day TAT * * * *								
								FedEx Airbill No.:								
								Sampler's Signature <i>M. J. Hoang</i>								
TAT: <u>3-day</u> Standard		Rush Date		Seals Intact? <u>Y</u> <u>N</u>		Received Good Condition <u>Y</u> <u>N</u> Cold										

White - Lab Copy Canary - Field Copy Pink - File Copy

168

Form Number: 433_2
Rev. 10-19-07

Client:	Shaw-Longhorn			
Workorder Number:	B 24848			
Date Received:	3-24-09			
Delivered by:	() Fedx	() UPS	() Client	() Courier Time: 920
Opened by:	RLK			
IR Temp Gun:	() G	(X) H		
Logged by:	RLK	L	C4030497	

Cooler information

Cooler ID	Temp C	Airbill#	COC#	Other
2930	4	J264 777 4952	5816	QT - 3 days

Inspection Checklist

	Y	N	NA	Discrepancy ID
Were shipping coolers sealed?	✓			
Were custody seals intact?	✓			
Were cooler temperatures in range of 0 - 6?	✓			
Was ice present?	✓			
Were COC's received/ information complete/signed and dated?	✓			
Were sample containers and labels intact and match COC? (RLK)	✓		✓	(D)
Were the correct containers and volumes received?	✓			
Were correct preservatives used? (water only)	✓			
Were pH ranges acceptable? (voa's excluded)	✓			
Were VOA samples free of headspace (< 6mm)?	✓			
Were samples received within EPA hold times?	✓			

Discrepancy/Comments/Other Problems

(1) Rec'd 1 set of Trip Blanks, Both Broken.

Distribution

Name of Microbac representative:
Client/Company:
Person Contacted:
Date contacted:

Resolution/other comments:

Internal Chain of Custody Report

Login: L09030497

Account: 2773

Project: 2773.025

Samples: 4

Due Date: 27-MAR-2009

Samplenum **Container ID** **Products**
L09030497-02 564993 CR-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	L1	24-MAR-2009 11:18	RLK	
2	PREP	L1	W1	24-MAR-2009 11:26	SDL	RLK
3	EXTRACT	DIG	METALS	24-MAR-2009 12:31		VC
4	STORE	DIG	A1	24-MAR-2009 14:41	RLK	REK

Samplenum **Container ID** **Products**
L09030497-03 564994 AS-MS MN-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	L1	24-MAR-2009 11:23	RLK	
2	PREP	L1	W1	24-MAR-2009 11:26	SDL	RLK
3	EXTRACT	DIG	METALS	24-MAR-2009 12:31		VC
4	STORE	DIG	A1	24-MAR-2009 14:41	RLK	REK

Samplenum **Container ID** **Products**
L09030497-02 564992 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	24-MAR-2009 11:18	RLK	
2	PREP	W1	SEM	24-MAR-2009 13:30	CPD	RLK
3	STORE	SEM	A1	30-MAR-2009 13:43	RLK	CPD

Samplenum **Container ID** **Products**
L09030497-04 564995 MN-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	L1	24-MAR-2009 11:23	RLK	
2	PREP	L1	W1	24-MAR-2009 11:26	SDL	RLK
3	EXTRACT	DIG	METALS	24-MAR-2009 12:31		VC
4	STORE	DIG	A1	24-MAR-2009 14:41	RLK	REK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030497

Account: 2773

Project: 2773.025

Samples: 4

Due Date: 27-MAR-2009

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030497-02	564991	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	24-MAR-2009 11:18	RLK	
2	ANALYZ	V1	ORG4	25-MAR-2009 09:32	MRT	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	24-MAR-2009 11:18	RLK	
2	ANALYZ	V1	ORG4	25-MAR-2009 09:32	MRT	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	24-MAR-2009 11:18	RLK	
2	ANALYZ	V1	ORG4	25-MAR-2009 09:32	MRT	JKT

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030497-01	564990	AS-MS MN-MS

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	L1	24-MAR-2009 11:18	RLK	
2	PREP	L1	W1	24-MAR-2009 11:26	SDL	RLK
3	EXTRACT	DIG	METALS	24-MAR-2009 12:31		VC
4	STORE	DIG	A1	24-MAR-2009 14:41	RLK	REK

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030497-01	564988	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	24-MAR-2009 11:18	RLK	
2	ANALYZ	V1	ORG4	25-MAR-2009 09:31	MRT	JKT

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	24-MAR-2009 11:18	RLK	
2	ANALYZ	V1	ORG4	25-MAR-2009 09:31	MRT	JKT

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	24-MAR-2009 11:18	RLK	
2	ANALYZ	V1	ORG4	25-MAR-2009 09:32	MRT	JKT

A1 - Sample Archive (COLD)
 A2 - Sample Archive (AMBIENT)
 F1 - Volatiles Freezer in Login
 V1 - Volatiles Refrigerator in Login
 W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030497**Account:** 2773**Project:** 2773.025**Samples:** 4**Due Date:** 27-MAR-2009

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030497-01	564989	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	24-MAR-2009 11:18	RLK	
2	PREP	W1	SEM	24-MAR-2009 13:30	CPD	RLK
3	STORE	SEM	A1	30-MAR-2009 13:43	RLK	CPD

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login





158 Starlite Drive, Marietta, OH 45750 • T:740-373-4071 • F:740-373-4835 • <http://www.microbac.com>

Laboratory Report Number: L09030649 - REVISED

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories.

Review and compilation of your report was completed by Microbac's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Kathy Albertson	<i>Team Chemist/Data Specialist</i>	kalbertson@microbac.com
Stephanie Mossburg	<i>Team Chemist/Data Specialist</i>	smossburg@microbac.com
Tony Long	<i>Team Chemist/Data Specialist</i>	tlong@microbac.com
Amanda Fickiesen	<i>Client Services Specialist</i>	afickiesen@microbac.com
Annie Brown	<i>Client Services Specialist</i>	abrown@microbac.com
Jacqueline Parsons	<i>Team Assistant</i>	jparsons@microbac.com

This report was reviewed on April 08, 2009.

Stephanie Mossburg - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories.

This report was certified on April 08, 2009.

David Vandenberg - Managing Director

State of origin: Texas

Accrediting authority: Texas Commission on Environmental Quality ID:T104704252-07-TX

QAPP: Microbac OVD

This report contains a total of 210 pages.

Look closer. Go further. Do more.



Microbac REPORT L09030649
PREPARED FOR Shaw E I, Inc.
WORK ID: LHAAP-16

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1.0 Introduction

Microbac Laboratories Inc.
REPORT NARRATIVE

Microbac Login No: L09030649

CHAIN OF CUSTODY: The chain of custody number was 5813 and 5814.

SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 2 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 03-APR-09

<i>Stephanie Mossburg</i>

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each environmental sample that includes:

- a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
- b) dilution factors,
- c) preparation methods,
- d) Cleanup methods, and
- e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

- a) Calculated recovery (%R) for each analyte, and
- b) The laboratory's surrogate QC limits.

✓ R5 Test reports/summary forms for blank samples;

✓ R6 Test reports/summary forms for laboratory control samples (LCSs) including:

- a) LCS spiking amount,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %R and relative percent differences (RPDs), and
- e) The laboratory's MS/MSD QC limits

✓ R8 Laboratory analytical duplicate (if applicable) recovery and precision:

- a) the amount of analyte measured in the duplicate,
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

MICHAEL D. COCHRAN



Semivolatiles Lab Supervisor

March 31, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030649
 Project Name: 798-LONGHORN
 Method: 9056
 Prep Batch Number(s): WG298547
 Reviewer Name: MICHAEL D. COCHRAN
 LRC Date: March 28, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?			✓		
Were % moisture (or solids) reported for all soil and sediment samples?			✓		
If required for the project, TICs reported?	✓				
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?	✓				
Were MS/MSD analyzed at the appropriate frequency?	✓				
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	✓				

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?	✓				
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?	✓				
Were analytical duplicates analyzed at the appropriate frequency?	✓				
Were RPDs or relative standard deviations within the laboratory QC limits?	✓				
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?			✓		
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	Not Applicable	Other
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name:	Microbac Laboratories Inc.
Laboratory Log Number:	L09030649
Project Name:	798-LONGHORN
Method:	9056
Prep Batch Number(s):	WG298547
Reviewer Name:	MICHAEL D. COCHRAN
LRC Date:	March 28, 2009

EXCEPTIONS REPORT

ER# - Description

- (1) NA = Not applicable to method or project
- (2) NR = Not reviewed
- (3) ER# = Exception report number

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

- ✓R1 Field chain-of-custody documentation;
- ✓R2 sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - b) dilution factors,
 - c) preparation methods,
 - d) Cleanup methods, and
 - e) If required for the project, tentatively identified compounds (TICs)
- ✓R4 Surrogate recovery data including:
 - a) Calculated recovery (%R) for each analyte, and
 - b) The laboratory's surrogate QC limits.
- ✓R5 Test reports/summary forms for blank samples;
- ✓R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amount,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- ✓R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %R and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- ✓R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- ✓R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- ✓R10 Other problems or anomalies.
- ✓The exception Report for every "No" or "Not Reviewed (NR)" item IN laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

MIKE D. ALBERTSON



Volatiles Lab Supervisor

April 8, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030649
 Project Name: 798-LONGHORN
 Method: 8260B
 Prep Batch Number(s): WG298505, WG298625, WG298610, WG298842, WG299157
 Reviewer Name: MIKE D. ALBERTSON
 LRC Date: April 08, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?		✓			2
Were surrogate percent recoveries in all samples within the laboratory QC limits?					
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		✓			1
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?	✓				
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?			✓		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?		✓			3
Was the ICAL curve verified for each analyte?		✓			4
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			✓		
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?	✓				
Were ion abundance data within the method-required QC limits?	✓				
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?	✓				
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?	✓				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NR(2)	ER(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

EXCEPTIONS REPORT

- 1) Bromobenzene, 2-hexanone, 1,2,4-trichlorobenzene, and 1,2,4-trimethylbenzene exceeded the upper advisory limits in the LCS/LCSD analyzed 03/31/09 on HPMS-10. 2-Hexanone exceeded the upper advisory limit and isopropylbenzene was below the lower advisory limit in the LCS/LCSD analyzed 03/30/09 on HPMS-10. 2-Chloroethylvinyl ether exceeded the upper advisory limit in the LCS/LCSD analyzed 04/02/09 on HPMS-11.
- 2) Dibromofluoromethane exceeded the upper control limit in samples 08, 12, 13, and 14 and the method blank analyzed 03/31/09 on HPMS-10.
- 3) Chloromethane and 2-chloroethylvinyl ether exceeded the upper control limit and bromomethane was below the lower control limit in the CCV analyzed 03/31/09 on HPMS-11. Vinyl acetate exceeded the upper control limit in the CCV analyzed 04/02/09 on HPMS-11. 2-Chloroethylvinyl ether exceeded the upper control limit in the CCV performed 04/07/09 on HPMS-11.
- 4) Vinyl acetate exceeded the upper control limit in the ICV performed 03/24/09 on HPMS-11.

Footnotes:

- (1) NA = Not applicable to method or project
 (2) NR = Not reviewed
 (3) ER# = Exception report number

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

LABORATORY REPORT

00087593

L09030649

04/08/09 10:26

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025

Project: Longhorn AAP

Site: LHAAP-16

P.O. Number: 389869/ 390836(GWTP)

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
16WW21-032409	L09030649-01	8260B	1	28-MAR-09
16WW21-032409-FD	L09030649-02	8260B	1	28-MAR-09
16WW41-032409	L09030649-03	8260B	50	28-MAR-09
16WW41-032409	L09030649-03	8260B	10	28-MAR-09
16WW42-032409	L09030649-04	8260B	1	28-MAR-09
16WW31-032409	L09030649-05	8260B	1	28-MAR-09
16WW40-032409	L09030649-06	8260B	10	28-MAR-09
16EW08-032709	L09030649-07	8260B	50	28-MAR-09
16EW08-032709	L09030649-07	8260B	25	28-MAR-09
16EW07-032709	L09030649-08	8260B	50	28-MAR-09
16EW06-032709	L09030649-09	8260B	5	28-MAR-09
16EW05-032709	L09030649-10	8260B	50	28-MAR-09
16EW04-032609	L09030649-11	8260B	1000	28-MAR-09
16EW04-032609	L09030649-11	8260B	50	28-MAR-09
16EW03-032609	L09030649-12	8260B	1000	28-MAR-09
16EW03-032609	L09030649-12	8260B	50	28-MAR-09
16EW02-032609	L09030649-13	8260B	1000	28-MAR-09
16EW02-032609	L09030649-13	8260B	50	28-MAR-09
16EW01-032609	L09030649-14	8260B	50	28-MAR-09
16EW01-032609	L09030649-14	8260B	200	28-MAR-09



Sample Number: **L09030649-01**
 Client ID: **16WW21-032409**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/24/2009 10:15**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 15:00**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 15:00**
 File ID: **10M71435**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

Sample Number: **L09030649-01**
 Client ID: **16WW21-032409**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/24/2009 10:15**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 15:00**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 15:00**
 File ID: **10M71435**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	118	86	118		
1,2-Dichloroethane-d4	99.7	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	90.4	86	115		

U Not detected at or above adjusted sample detection limit

Sample Number: **L09030649-02**
Client ID: **16WW21-032409-FD**
Matrix: **Water**
Workgroup Number: **WG298505**
Collect Date: **03/24/2009 10:15**
Sample Tag: **01**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **03/30/2009 15:32**
Cal Date: **03/18/2009 15:23**
Run Date: **03/30/2009 15:32**
File ID: **10M71436**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1	2.51	J	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3	0.262	J	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6		U	1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

Report Number: **L09030649**Report Date : **April 8, 2009**

00087597

Sample Number: **L09030649-02**
 Client ID: **16WW21-032409-FD**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/24/2009 10:15**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 15:32**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 15:32**
 File ID: **10M71436**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	118	86	118		
1,2-Dichloroethane-d4	103	80	120		
Toluene-d8	98.8	88	110		
4-Bromofluorobenzene	86.7	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L09030649-03**
 Client ID: **16WW41-032409**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/24/2009 10:45**
 Sample Tag: **DL02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 12:57**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 12:57**
 File ID: **11M58210**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	500	125
Benzene	71-43-2		U	50.0	6.25
Bromobenzene	108-86-1		U	50.0	6.25
Bromochloromethane	74-97-5		U	50.0	10.0
Bromodichloromethane	75-27-4		U	50.0	12.5
Bromoform	75-25-2		U	50.0	25.0
Bromomethane	74-83-9		U	50.0	25.0
2-Butanone	78-93-3		U	500	125
n-Butylbenzene	104-51-8		U	50.0	12.5
sec-Butylbenzene	135-98-8		U	50.0	12.5
tert-Butylbenzene	98-06-6		U	50.0	12.5
Carbon disulfide	75-15-0		U	50.0	25.0
Carbon tetrachloride	56-23-5		U	50.0	12.5
Chlorobenzene	108-90-7		U	50.0	6.25
Chlorodibromomethane	124-48-1		U	50.0	12.5
Chloroethane	75-00-3		U	50.0	25.0
2-Chloroethyl vinyl ether	110-75-8		U	500	100
Chloroform	67-66-3		U	50.0	6.25
Chloromethane	74-87-3		U	50.0	12.5
2-Chlorotoluene	95-49-8		U	50.0	6.25
4-Chlorotoluene	106-43-4		U	50.0	12.5
1,2-Dibromo-3-chloropropane	96-12-8		U	250	50.0
1,2-Dibromoethane	106-93-4		U	50.0	12.5
Dibromomethane	74-95-3		U	50.0	12.5
1,2-Dichlorobenzene	95-50-1		U	50.0	6.25
1,3-Dichlorobenzene	541-73-1		U	50.0	12.5
1,4-Dichlorobenzene	106-46-7		U	50.0	6.25
Dichlorodifluoromethane	75-71-8		U	50.0	12.5
1,1-Dichloroethane	75-34-3		U	50.0	6.25
1,2-Dichloroethane	107-06-2		U	50.0	12.5
1,1-Dichloroethene	75-35-4		U	50.0	25.0
cis-1,2-Dichloroethene	156-59-2	180		50.0	12.5
trans-1,2-Dichloroethene	156-60-5		U	50.0	12.5
1,2-Dichloropropane	78-87-5		U	50.0	10.0
1,3-Dichloropropane	142-28-9		U	50.0	10.0
2,2-Dichloropropane	594-20-7		U	50.0	12.5
cis-1,3-Dichloropropene	10061-01-5		U	50.0	12.5
trans-1,3-Dichloropropene	10061-02-6		U	50.0	25.0
1,1-Dichloropropene	563-58-6		U	50.0	12.5
Ethylbenzene	100-41-4		U	50.0	12.5
2-Hexanone	591-78-6		U	500	125
Hexachlorobutadiene	87-68-3		U	50.0	12.5
Isopropylbenzene	98-82-8		U	50.0	12.5
p-Isopropyltoluene	99-87-6		U	50.0	12.5
4-Methyl-2-pentanone	108-10-1		U	500	125
Methylene chloride	75-09-2		U	250	12.5
Naphthalene	91-20-3		U	50.0	10.0
n-Propylbenzene	103-65-1		U	50.0	6.25
Styrene	100-42-5		U	50.0	6.25
1,1,1,2-Tetrachloroethane	630-20-6		U	50.0	12.5
1,1,2,2-Tetrachloroethane	79-34-5		U	50.0	6.25
Tetrachloroethene	127-18-4		U	50.0	12.5
Toluene	108-88-3		U	50.0	12.5
1,2,3-Trichlorobenzene	87-61-6		U	50.0	7.50
1,2,4-Trichlorobenzene	120-82-1		U	50.0	10.0
1,1,1-Trichloroethane	71-55-6		U	50.0	12.5
1,1,2-Trichloroethane	79-00-5		U	50.0	12.5
Trichloroethene	79-01-6	1690		50.0	12.5
Trichlorofluoromethane	75-69-4	17.1	J	50.0	12.5

Report Number: **L09030649**Report Date : **April 8, 2009**

00087599

Sample Number: **L09030649-03**
 Client ID: **16WW41-032409**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/24/2009 10:45**
 Sample Tag: **DL02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 12:57**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 12:57**
 File ID: **11M58210**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	50.0	25.0
1,2,4-Trimethylbenzene	95-63-6		U	50.0	12.5
1,3,5-Trimethylbenzene	108-67-8		U	50.0	12.5
Vinyl acetate	108-05-4		U	500	125
Vinyl chloride	75-01-4	21.7	J	50.0	12.5
o-Xylene	95-47-6		U	50.0	12.5
m-,p-Xylene	136777-61-2		U	50.0	25.0
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	102	86	118		
1,2-Dichloroethane-d4	100	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	104	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L09030649-03**
Client ID: **16WW41-032409**
Matrix: **Water**
Workgroup Number: **WG298505**
Collect Date: **03/24/2009 10:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **10**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **03/30/2009 16:04**
Cal Date: **03/18/2009 15:23**
Run Date: **03/30/2009 16:04**
File ID: **10M71437**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	100	25.0
Benzene	71-43-2		U	10.0	1.25
Bromobenzene	108-86-1		U	10.0	1.25
Bromochloromethane	74-97-5		U	10.0	2.00
Bromodichloromethane	75-27-4		U	10.0	2.50
Bromoform	75-25-2		U	10.0	5.00
Bromomethane	74-83-9		U	10.0	5.00
2-Butanone	78-93-3		U	100	25.0
n-Butylbenzene	104-51-8		U	10.0	2.50
sec-Butylbenzene	135-98-8		U	10.0	2.50
tert-Butylbenzene	98-06-6		U	10.0	2.50
Carbon disulfide	75-15-0		U	10.0	5.00
Carbon tetrachloride	56-23-5		U	10.0	2.50
Chlorobenzene	108-90-7		U	10.0	1.25
Chlorodibromomethane	124-48-1		U	10.0	2.50
Chloroethane	75-00-3		U	10.0	5.00
2-Chloroethyl vinyl ether	110-75-8		U	100	20.0
Chloroform	67-66-3		U	10.0	1.25
Chloromethane	74-87-3		U	10.0	2.50
2-Chlorotoluene	95-49-8		U	10.0	1.25
4-Chlorotoluene	106-43-4		U	10.0	2.50
1,2-Dibromo-3-chloropropane	96-12-8		U	50.0	10.0
1,2-Dibromoethane	106-93-4		U	10.0	2.50
Dibromomethane	74-95-3		U	10.0	2.50
1,2-Dichlorobenzene	95-50-1		U	10.0	1.25
1,3-Dichlorobenzene	541-73-1		U	10.0	2.50
1,4-Dichlorobenzene	106-46-7		U	10.0	1.25
Dichlorodifluoromethane	75-71-8		U	10.0	2.50
1,1-Dichloroethane	75-34-3		U	10.0	1.25
1,2-Dichloroethane	107-06-2		U	10.0	2.50
1,1-Dichloroethene	75-35-4		U	10.0	5.00
cis-1,2-Dichloroethene	156-59-2	209		10.0	2.50
trans-1,2-Dichloroethene	156-60-5		U	10.0	2.50
1,2-Dichloropropane	78-87-5		U	10.0	2.00
1,3-Dichloropropane	142-28-9		U	10.0	2.00
2,2-Dichloropropane	594-20-7		U	10.0	2.50
cis-1,3-Dichloropropene	10061-01-5		U	10.0	2.50
trans-1,3-Dichloropropene	10061-02-6		U	10.0	5.00
1,1-Dichloropropene	563-58-6		U	10.0	2.50
Ethylbenzene	100-41-4		U	10.0	2.50
2-Hexanone	591-78-6		U	100	25.0
Hexachlorobutadiene	87-68-3		U	10.0	2.50
Isopropylbenzene	98-82-8		U	10.0	2.50
p-Isopropyltoluene	99-87-6		U	10.0	2.50
4-Methyl-2-pentanone	108-10-1		U	100	25.0
Methylene chloride	75-09-2	6.52	J	50.0	2.50
Naphthalene	91-20-3		U	10.0	2.00
n-Propylbenzene	103-65-1		U	10.0	1.25
Styrene	100-42-5		U	10.0	1.25
1,1,1,2-Tetrachloroethane	630-20-6		U	10.0	2.50
1,1,2,2-Tetrachloroethane	79-34-5		U	10.0	1.25
Tetrachloroethene	127-18-4		U	10.0	2.50
Toluene	108-88-3		U	10.0	2.50
1,2,3-Trichlorobenzene	87-61-6		U	10.0	1.50
1,2,4-Trichlorobenzene	120-82-1		U	10.0	2.00
1,1,1-Trichloroethane	71-55-6		U	10.0	2.50
1,1,2-Trichloroethane	79-00-5		U	10.0	2.50
Trichloroethene	79-01-6	2130	I	10.0	2.50
Trichlorofluoromethane	75-69-4		U	10.0	2.50

Report Number: **L09030649**Report Date : **April 8, 2009**

00087601

Sample Number: **L09030649-03**
 Client ID: **16WW41-032409**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/24/2009 10:45**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **10**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 16:04**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 16:04**
 File ID: **10M71437**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	10.0	5.00
1,2,4-Trimethylbenzene	95-63-6		U	10.0	2.50
1,3,5-Trimethylbenzene	108-67-8		U	10.0	2.50
Vinyl acetate	108-05-4		U	100	25.0
Vinyl chloride	75-01-4	22.4		10.0	2.50
o-Xylene	95-47-6		U	10.0	2.50
m-,p-Xylene	136777-61-2		U	10.0	5.00
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	113	86	118		
1,2-Dichloroethane-d4	101	80	120		
Toluene-d8	101	88	110		
4-Bromofluorobenzene	88.5	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

I Semiquantitative result (out of instrument calibration range)

Sample Number: **L09030649-04**
 Client ID: **16WW42-032409**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/24/2009 14:15**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 13:28**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 13:28**
 File ID: **11M58211**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	3.63		1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6	9.11		1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

Sample Number: **L09030649-04**
 Client ID: **16WW42-032409**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/24/2009 14:15**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 13:28**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 13:28**
 File ID: **11M58211**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	102	86	118		
1,2-Dichloroethane-d4	102	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	107	86	115		

U Not detected at or above adjusted sample detection limit

Sample Number: **L09030649-05**
 Client ID: **16WW31-032409**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/24/2009 13:15**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 13:59**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 13:59**
 File ID: **11M58212**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3		U	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2		U	1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6	6.23		1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

Sample Number: **L09030649-05**
 Client ID: **16WW31-032409**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/24/2009 13:15**
 Sample Tag: **01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 13:59**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 13:59**
 File ID: **11M58212**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4		U	1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	101	86	118		
1,2-Dichloroethane-d4	99.1	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	106	86	115		

U Not detected at or above adjusted sample detection limit

Sample Number: **L09030649-06**
Client ID: **16WW40-032409**
Matrix: **Water**
Workgroup Number: **WG298610**
Collect Date: **03/24/2009 15:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **WTD**
Dilution: **10**
Units: **ug/L**

Instrument: **HPMS11**
Prep Date: **03/31/2009 14:30**
Cal Date: **03/24/2009 16:13**
Run Date: **03/31/2009 14:30**
File ID: **11M58213**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	100	25.0
Benzene	71-43-2		U	10.0	1.25
Bromobenzene	108-86-1		U	10.0	1.25
Bromochloromethane	74-97-5		U	10.0	2.00
Bromodichloromethane	75-27-4		U	10.0	2.50
Bromoform	75-25-2		U	10.0	5.00
Bromomethane	74-83-9		U	10.0	5.00
2-Butanone	78-93-3		U	100	25.0
n-Butylbenzene	104-51-8		U	10.0	2.50
sec-Butylbenzene	135-98-8		U	10.0	2.50
tert-Butylbenzene	98-06-6		U	10.0	2.50
Carbon disulfide	75-15-0		U	10.0	5.00
Carbon tetrachloride	56-23-5		U	10.0	2.50
Chlorobenzene	108-90-7		U	10.0	1.25
Chlorodibromomethane	124-48-1		U	10.0	2.50
Chloroethane	75-00-3		U	10.0	5.00
2-Chloroethyl vinyl ether	110-75-8		U	100	20.0
Chloroform	67-66-3		U	10.0	1.25
Chloromethane	74-87-3		U	10.0	2.50
2-Chlorotoluene	95-49-8		U	10.0	1.25
4-Chlorotoluene	106-43-4		U	10.0	2.50
1,2-Dibromo-3-chloropropane	96-12-8		U	50.0	10.0
1,2-Dibromoethane	106-93-4		U	10.0	2.50
Dibromomethane	74-95-3		U	10.0	2.50
1,2-Dichlorobenzene	95-50-1		U	10.0	1.25
1,3-Dichlorobenzene	541-73-1		U	10.0	2.50
1,4-Dichlorobenzene	106-46-7		U	10.0	1.25
Dichlorodifluoromethane	75-71-8		U	10.0	2.50
1,1-Dichloroethane	75-34-3		U	10.0	1.25
1,2-Dichloroethane	107-06-2	5.41	J	10.0	2.50
1,1-Dichloroethene	75-35-4	5.20	J	10.0	5.00
cis-1,2-Dichloroethene	156-59-2	29.3		10.0	2.50
trans-1,2-Dichloroethene	156-60-5		U	10.0	2.50
1,2-Dichloropropane	78-87-5		U	10.0	2.00
1,3-Dichloropropane	142-28-9		U	10.0	2.00
2,2-Dichloropropane	594-20-7		U	10.0	2.50
cis-1,3-Dichloropropene	10061-01-5		U	10.0	2.50
trans-1,3-Dichloropropene	10061-02-6		U	10.0	5.00
1,1-Dichloropropene	563-58-6		U	10.0	2.50
Ethylbenzene	100-41-4		U	10.0	2.50
2-Hexanone	591-78-6		U	100	25.0
Hexachlorobutadiene	87-68-3		U	10.0	2.50
Isopropylbenzene	98-82-8		U	10.0	2.50
p-Isopropyltoluene	99-87-6		U	10.0	2.50
4-Methyl-2-pentanone	108-10-1		U	100	25.0
Methylene chloride	75-09-2		U	50.0	2.50
Naphthalene	91-20-3		U	10.0	2.00
n-Propylbenzene	103-65-1		U	10.0	1.25
Styrene	100-42-5		U	10.0	1.25
1,1,1,2-Tetrachloroethane	630-20-6		U	10.0	2.50
1,1,2,2-Tetrachloroethane	79-34-5		U	10.0	1.25
Tetrachloroethene	127-18-4		U	10.0	2.50
Toluene	108-88-3		U	10.0	2.50
1,2,3-Trichlorobenzene	87-61-6		U	10.0	1.50
1,2,4-Trichlorobenzene	120-82-1		U	10.0	2.00
1,1,1-Trichloroethane	71-55-6		U	10.0	2.50
1,1,2-Trichloroethane	79-00-5		U	10.0	2.50
Trichloroethene	79-01-6	1320		10.0	2.50
Trichlorofluoromethane	75-69-4		U	10.0	2.50

Report Number: **L09030649**Report Date : **April 8, 2009**

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Sample Number: **L09030649-06**
 Client ID: **16WW40-032409**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/24/2009 15:30**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **10**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 14:30**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 14:30**
 File ID: **11M58213**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	10.0	5.00
1,2,4-Trimethylbenzene	95-63-6		U	10.0	2.50
1,3,5-Trimethylbenzene	108-67-8		U	10.0	2.50
Vinyl acetate	108-05-4		U	100	25.0
Vinyl chloride	75-01-4		U	10.0	2.50
o-Xylene	95-47-6		U	10.0	2.50
m-,p-Xylene	136777-61-2		U	10.0	5.00
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	101	86	118		
1,2-Dichloroethane-d4	102	80	120		
Toluene-d8	104	88	110		
4-Bromofluorobenzene	107	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L09030649-07**
Client ID: **16EW08-032709**
Matrix: **Water**
Workgroup Number: **WG299157**
Collect Date: **03/27/2009 16:25**
Sample Tag: **DL02**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **WTD**
Dilution: **50**
Units: **ug/L**

Instrument: **HPMS11**
Prep Date: **04/07/2009 21:11**
Cal Date: **03/24/2009 16:13**
Run Date: **04/07/2009 21:11**
File ID: **11M58390**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1	134	J	500	125
Benzene	71-43-2		U	50.0	6.25
Bromobenzene	108-86-1		U	50.0	6.25
Bromochloromethane	74-97-5		U	50.0	10.0
Bromodichloromethane	75-27-4		U	50.0	12.5
Bromoform	75-25-2		U	50.0	25.0
Bromomethane	74-83-9		U	50.0	25.0
2-Butanone	78-93-3		U	500	125
n-Butylbenzene	104-51-8		U	50.0	12.5
sec-Butylbenzene	135-98-8		U	50.0	12.5
tert-Butylbenzene	98-06-6		U	50.0	12.5
Carbon disulfide	75-15-0		U	50.0	25.0
Carbon tetrachloride	56-23-5		U	50.0	12.5
Chlorobenzene	108-90-7		U	50.0	6.25
Chlorodibromomethane	124-48-1		U	50.0	12.5
Chloroethane	75-00-3		U	50.0	25.0
2-Chloroethyl vinyl ether	110-75-8		U	500	100
Chloroform	67-66-3		U	50.0	6.25
Chloromethane	74-87-3		U	50.0	12.5
2-Chlorotoluene	95-49-8		U	50.0	6.25
4-Chlorotoluene	106-43-4		U	50.0	12.5
1,2-Dibromo-3-chloropropane	96-12-8		U	250	50.0
1,2-Dibromoethane	106-93-4		U	50.0	12.5
Dibromomethane	74-95-3		U	50.0	12.5
1,2-Dichlorobenzene	95-50-1		U	50.0	6.25
1,3-Dichlorobenzene	541-73-1		U	50.0	12.5
1,4-Dichlorobenzene	106-46-7		U	50.0	6.25
Dichlorodifluoromethane	75-71-8		U	50.0	12.5
1,1-Dichloroethane	75-34-3		U	50.0	6.25
1,2-Dichloroethane	107-06-2	22.6	J	50.0	12.5
1,1-Dichloroethene	75-35-4		U	50.0	25.0
cis-1,2-Dichloroethene	156-59-2	2680		50.0	12.5
trans-1,2-Dichloroethene	156-60-5		U	50.0	12.5
1,2-Dichloropropane	78-87-5		U	50.0	10.0
1,3-Dichloropropane	142-28-9		U	50.0	10.0
2,2-Dichloropropane	594-20-7		U	50.0	12.5
cis-1,3-Dichloropropene	10061-01-5		U	50.0	12.5
trans-1,3-Dichloropropene	10061-02-6		U	50.0	25.0
1,1-Dichloropropene	563-58-6		U	50.0	12.5
Ethylbenzene	100-41-4		U	50.0	12.5
2-Hexanone	591-78-6		U	500	125
Hexachlorobutadiene	87-68-3		U	50.0	12.5
Isopropylbenzene	98-82-8		U	50.0	12.5
p-Isopropyltoluene	99-87-6		U	50.0	12.5
4-Methyl-2-pentanone	108-10-1		U	500	125
Methylene chloride	75-09-2	20.3	J	250	12.5
Naphthalene	91-20-3		U	50.0	10.0
n-Propylbenzene	103-65-1		U	50.0	6.25
Styrene	100-42-5		U	50.0	6.25
1,1,1,2-Tetrachloroethane	630-20-6		U	50.0	12.5
1,1,2,2-Tetrachloroethane	79-34-5		U	50.0	6.25
Tetrachloroethene	127-18-4		U	50.0	12.5
Toluene	108-88-3		U	50.0	12.5
1,2,3-Trichlorobenzene	87-61-6		U	50.0	7.50
1,2,4-Trichlorobenzene	120-82-1		U	50.0	10.0
1,1,1-Trichloroethane	71-55-6		U	50.0	12.5
1,1,2-Trichloroethane	79-00-5		U	50.0	12.5
Trichloroethene	79-01-6	4870		50.0	12.5
Trichlorofluoromethane	75-69-4		U	50.0	12.5

Sample Number: **L09030649-07**
 Client ID: **16EW08-032709**
 Matrix: **Water**
 Workgroup Number: **WG299157**
 Collect Date: **03/27/2009 16:25**
 Sample Tag: **DL02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **04/07/2009 21:11**
 Cal Date: **03/24/2009 16:13**
 Run Date: **04/07/2009 21:11**
 File ID: **11M58390**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	50.0	25.0
1,2,4-Trimethylbenzene	95-63-6		U	50.0	12.5
1,3,5-Trimethylbenzene	108-67-8		U	50.0	12.5
Vinyl acetate	108-05-4		U	500	125
Vinyl chloride	75-01-4	67.3		50.0	12.5
o-Xylene	95-47-6		U	50.0	12.5
m-,p-Xylene	136777-61-2		U	50.0	25.0
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	102	86	118		
1,2-Dichloroethane-d4	107	80	120		
Toluene-d8	103	88	110		
4-Bromofluorobenzene	109	86	115		

U Not detected at or above adjusted sample detection limit
 J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L09030649-07**
 Client ID: **16EW08-032709**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/27/2009 16:25**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **25**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 15:01**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 15:01**
 File ID: **11M58214**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	250	62.5
Benzene	71-43-2		U	25.0	3.13
Bromobenzene	108-86-1		U	25.0	3.13
Bromochloromethane	74-97-5		U	25.0	5.00
Bromodichloromethane	75-27-4		U	25.0	6.25
Bromoform	75-25-2		U	25.0	12.5
Bromomethane	74-83-9		U	25.0	12.5
2-Butanone	78-93-3		U	250	62.5
n-Butylbenzene	104-51-8		U	25.0	6.25
sec-Butylbenzene	135-98-8		U	25.0	6.25
tert-Butylbenzene	98-06-6		U	25.0	6.25
Carbon disulfide	75-15-0		U	25.0	12.5
Carbon tetrachloride	56-23-5		U	25.0	6.25
Chlorobenzene	108-90-7		U	25.0	3.13
Chlorodibromomethane	124-48-1		U	25.0	6.25
Chloroethane	75-00-3		U	25.0	12.5
2-Chloroethyl vinyl ether	110-75-8		U	250	50.0
Chloroform	67-66-3		U	25.0	3.13
Chloromethane	74-87-3		U	25.0	6.25
2-Chlorotoluene	95-49-8		U	25.0	3.13
4-Chlorotoluene	106-43-4		U	25.0	6.25
1,2-Dibromo-3-chloropropane	96-12-8		U	125	25.0
1,2-Dibromoethane	106-93-4		U	25.0	6.25
Dibromomethane	74-95-3		U	25.0	6.25
1,2-Dichlorobenzene	95-50-1		U	25.0	3.13
1,3-Dichlorobenzene	541-73-1		U	25.0	6.25
1,4-Dichlorobenzene	106-46-7		U	25.0	3.13
Dichlorodifluoromethane	75-71-8		U	25.0	6.25
1,1-Dichloroethane	75-34-3		U	25.0	3.13
1,2-Dichloroethane	107-06-2	21.7	J	25.0	6.25
1,1-Dichloroethene	75-35-4		U	25.0	12.5
cis-1,2-Dichloroethene	156-59-2	2690		25.0	6.25
trans-1,2-Dichloroethene	156-60-5		U	25.0	6.25
1,2-Dichloropropane	78-87-5		U	25.0	5.00
1,3-Dichloropropane	142-28-9		U	25.0	5.00
2,2-Dichloropropane	594-20-7		U	25.0	6.25
cis-1,3-Dichloropropene	10061-01-5		U	25.0	6.25
trans-1,3-Dichloropropene	10061-02-6		U	25.0	12.5
1,1-Dichloropropene	563-58-6		U	25.0	6.25
Ethylbenzene	100-41-4		U	25.0	6.25
2-Hexanone	591-78-6		U	250	62.5
Hexachlorobutadiene	87-68-3		U	25.0	6.25
Isopropylbenzene	98-82-8		U	25.0	6.25
p-Isopropyltoluene	99-87-6		U	25.0	6.25
4-Methyl-2-pentanone	108-10-1		U	250	62.5
Methylene chloride	75-09-2	6.93	J	125	6.25
Naphthalene	91-20-3		U	25.0	5.00
n-Propylbenzene	103-65-1		U	25.0	3.13
Styrene	100-42-5		U	25.0	3.13
1,1,1,2-Tetrachloroethane	630-20-6		U	25.0	6.25
1,1,2,2-Tetrachloroethane	79-34-5		U	25.0	3.13
Tetrachloroethene	127-18-4		U	25.0	6.25
Toluene	108-88-3		U	25.0	6.25
1,2,3-Trichlorobenzene	87-61-6		U	25.0	3.75
1,2,4-Trichlorobenzene	120-82-1		U	25.0	5.00
1,1,1-Trichloroethane	71-55-6		U	25.0	6.25
1,1,2-Trichloroethane	79-00-5		U	25.0	6.25
Trichloroethene	79-01-6	5310	I	25.0	6.25
Trichlorofluoromethane	75-69-4		U	25.0	6.25

Sample Number: **L09030649-07**
 Client ID: **16EW08-032709**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/27/2009 16:25**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **25**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 15:01**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 15:01**
 File ID: **11M58214**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	25.0	12.5
1,2,4-Trimethylbenzene	95-63-6		U	25.0	6.25
1,3,5-Trimethylbenzene	108-67-8		U	25.0	6.25
Vinyl acetate	108-05-4		U	250	62.5
Vinyl chloride	75-01-4	35.0		25.0	6.25
o-Xylene	95-47-6		U	25.0	6.25
m-,p-Xylene	136777-61-2		U	25.0	12.5
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	103	86	118		
1,2-Dichloroethane-d4	99.9	80	120		
Toluene-d8	103	88	110		
4-Bromofluorobenzene	106	86	115		

U Not detected at or above adjusted sample detection limit
 J The analyte was positively identified, but the quantitation was below the RL
 I Semiquantitative result (out of instrument calibration range)

Sample Number: **L09030649-08**
 Client ID: **16EW07-032709**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/27/2009 14:30**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 18:47**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 18:47**
 File ID: **10M71442**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	500	125
Benzene	71-43-2		U	50.0	6.25
Bromobenzene	108-86-1		U	50.0	6.25
Bromochloromethane	74-97-5		U	50.0	10.0
Bromodichloromethane	75-27-4		U	50.0	12.5
Bromoform	75-25-2		U	50.0	25.0
Bromomethane	74-83-9		U	50.0	25.0
2-Butanone	78-93-3		U	500	125
n-Butylbenzene	104-51-8		U	50.0	12.5
sec-Butylbenzene	135-98-8		U	50.0	12.5
tert-Butylbenzene	98-06-6		U	50.0	12.5
Carbon disulfide	75-15-0		U	50.0	25.0
Carbon tetrachloride	56-23-5		U	50.0	12.5
Chlorobenzene	108-90-7		U	50.0	6.25
Chlorodibromomethane	124-48-1		U	50.0	12.5
Chloroethane	75-00-3		U	50.0	25.0
2-Chloroethyl vinyl ether	110-75-8		U	500	100
Chloroform	67-66-3		U	50.0	6.25
Chloromethane	74-87-3		U	50.0	12.5
2-Chlorotoluene	95-49-8		U	50.0	6.25
4-Chlorotoluene	106-43-4		U	50.0	12.5
1,2-Dibromo-3-chloropropane	96-12-8		U	250	50.0
1,2-Dibromoethane	106-93-4		U	50.0	12.5
Dibromomethane	74-95-3		U	50.0	12.5
1,2-Dichlorobenzene	95-50-1		U	50.0	6.25
1,3-Dichlorobenzene	541-73-1		U	50.0	12.5
1,4-Dichlorobenzene	106-46-7		U	50.0	6.25
Dichlorodifluoromethane	75-71-8		U	50.0	12.5
1,1-Dichloroethane	75-34-3		U	50.0	6.25
1,2-Dichloroethane	107-06-2	23.2	J	50.0	12.5
1,1-Dichloroethene	75-35-4		U	50.0	25.0
cis-1,2-Dichloroethene	156-59-2	2910		50.0	12.5
trans-1,2-Dichloroethene	156-60-5		U	50.0	12.5
1,2-Dichloropropane	78-87-5		U	50.0	10.0
1,3-Dichloropropane	142-28-9		U	50.0	10.0
2,2-Dichloropropane	594-20-7		U	50.0	12.5
cis-1,3-Dichloropropene	10061-01-5		U	50.0	12.5
trans-1,3-Dichloropropene	10061-02-6		U	50.0	25.0
1,1-Dichloropropene	563-58-6		U	50.0	12.5
Ethylbenzene	100-41-4		U	50.0	12.5
2-Hexanone	591-78-6		U	500	125
Hexachlorobutadiene	87-68-3		U	50.0	12.5
Isopropylbenzene	98-82-8		U	50.0	12.5
p-Isopropyltoluene	99-87-6		U	50.0	12.5
4-Methyl-2-pentanone	108-10-1		U	500	125
Methylene chloride	75-09-2		U	250	12.5
Naphthalene	91-20-3		U	50.0	10.0
n-Propylbenzene	103-65-1		U	50.0	6.25
Styrene	100-42-5		U	50.0	6.25
1,1,1,2-Tetrachloroethane	630-20-6		U	50.0	12.5
1,1,2,2-Tetrachloroethane	79-34-5		U	50.0	6.25
Tetrachloroethene	127-18-4		U	50.0	12.5
Toluene	108-88-3		U	50.0	12.5
1,2,3-Trichlorobenzene	87-61-6		U	50.0	7.50
1,2,4-Trichlorobenzene	120-82-1		U	50.0	10.0
1,1,1-Trichloroethane	71-55-6		U	50.0	12.5
1,1,2-Trichloroethane	79-00-5		U	50.0	12.5
Trichloroethene	79-01-6	6040		50.0	12.5
Trichlorofluoromethane	75-69-4		U	50.0	12.5

Report Number: **L09030649**Report Date : **April 8, 2009**

00087613

Sample Number: **L09030649-08**
 Client ID: **16EW07-032709**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/27/2009 14:30**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 18:47**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 18:47**
 File ID: **10M71442**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	50.0	25.0
1,2,4-Trimethylbenzene	95-63-6		U	50.0	12.5
1,3,5-Trimethylbenzene	108-67-8		U	50.0	12.5
Vinyl acetate	108-05-4		U	500	125
Vinyl chloride	75-01-4		U	50.0	12.5
o-Xylene	95-47-6		U	50.0	12.5
m-,p-Xylene	136777-61-2		U	50.0	25.0
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	121	86	118	*	
1,2-Dichloroethane-d4	104	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	88.7	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

* Surrogate or spike compound out of range

Sample Number: **L09030649-09**
 Client ID: **16EW06-032709**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/27/2009 11:15**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **5**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 15:32**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 15:32**
 File ID: **11M58215**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	50.0	12.5
Benzene	71-43-2		U	5.00	0.625
Bromobenzene	108-86-1		U	5.00	0.625
Bromochloromethane	74-97-5		U	5.00	1.00
Bromodichloromethane	75-27-4		U	5.00	1.25
Bromoform	75-25-2		U	5.00	2.50
Bromomethane	74-83-9		U	5.00	2.50
2-Butanone	78-93-3		U	50.0	12.5
n-Butylbenzene	104-51-8		U	5.00	1.25
sec-Butylbenzene	135-98-8		U	5.00	1.25
tert-Butylbenzene	98-06-6		U	5.00	1.25
Carbon disulfide	75-15-0		U	5.00	2.50
Carbon tetrachloride	56-23-5		U	5.00	1.25
Chlorobenzene	108-90-7		U	5.00	0.625
Chlorodibromomethane	124-48-1		U	5.00	1.25
Chloroethane	75-00-3		U	5.00	2.50
2-Chloroethyl vinyl ether	110-75-8		U	50.0	10.0
Chloroform	67-66-3		U	5.00	0.625
Chloromethane	74-87-3		U	5.00	1.25
2-Chlorotoluene	95-49-8		U	5.00	0.625
4-Chlorotoluene	106-43-4		U	5.00	1.25
1,2-Dibromo-3-chloropropane	96-12-8		U	25.0	5.00
1,2-Dibromoethane	106-93-4		U	5.00	1.25
Dibromomethane	74-95-3		U	5.00	1.25
1,2-Dichlorobenzene	95-50-1		U	5.00	0.625
1,3-Dichlorobenzene	541-73-1		U	5.00	1.25
1,4-Dichlorobenzene	106-46-7		U	5.00	0.625
Dichlorodifluoromethane	75-71-8		U	5.00	1.25
1,1-Dichloroethane	75-34-3		U	5.00	0.625
1,2-Dichloroethane	107-06-2	1.58	J	5.00	1.25
1,1-Dichloroethene	75-35-4		U	5.00	2.50
cis-1,2-Dichloroethene	156-59-2	158		5.00	1.25
trans-1,2-Dichloroethene	156-60-5		U	5.00	1.25
1,2-Dichloropropane	78-87-5		U	5.00	1.00
1,3-Dichloropropane	142-28-9		U	5.00	1.00
2,2-Dichloropropane	594-20-7		U	5.00	1.25
cis-1,3-Dichloropropene	10061-01-5		U	5.00	1.25
trans-1,3-Dichloropropene	10061-02-6		U	5.00	2.50
1,1-Dichloropropene	563-58-6		U	5.00	1.25
Ethylbenzene	100-41-4		U	5.00	1.25
2-Hexanone	591-78-6		U	50.0	12.5
Hexachlorobutadiene	87-68-3		U	5.00	1.25
Isopropylbenzene	98-82-8		U	5.00	1.25
p-Isopropyltoluene	99-87-6		U	5.00	1.25
4-Methyl-2-pentanone	108-10-1		U	50.0	12.5
Methylene chloride	75-09-2		U	25.0	1.25
Naphthalene	91-20-3		U	5.00	1.00
n-Propylbenzene	103-65-1		U	5.00	0.625
Styrene	100-42-5		U	5.00	0.625
1,1,1,2-Tetrachloroethane	630-20-6		U	5.00	1.25
1,1,2,2-Tetrachloroethane	79-34-5		U	5.00	0.625
Tetrachloroethene	127-18-4		U	5.00	1.25
Toluene	108-88-3		U	5.00	1.25
1,2,3-Trichlorobenzene	87-61-6		U	5.00	0.750
1,2,4-Trichlorobenzene	120-82-1		U	5.00	1.00
1,1,1-Trichloroethane	71-55-6		U	5.00	1.25
1,1,2-Trichloroethane	79-00-5		U	5.00	1.25
Trichloroethene	79-01-6	536		5.00	1.25
Trichlorofluoromethane	75-69-4		U	5.00	1.25

Sample Number: **L09030649-09**
 Client ID: **16EW06-032709**
 Matrix: **Water**
 Workgroup Number: **WG298610**
 Collect Date: **03/27/2009 11:15**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **WTD**
 Dilution: **5**
 Units: **ug/L**

Instrument: **HPMS11**
 Prep Date: **03/31/2009 15:32**
 Cal Date: **03/24/2009 16:13**
 Run Date: **03/31/2009 15:32**
 File ID: **11M58215**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	5.00	2.50
1,2,4-Trimethylbenzene	95-63-6		U	5.00	1.25
1,3,5-Trimethylbenzene	108-67-8		U	5.00	1.25
Vinyl acetate	108-05-4		U	50.0	12.5
Vinyl chloride	75-01-4	2.41	J	5.00	1.25
o-Xylene	95-47-6		U	5.00	1.25
m-,p-Xylene	136777-61-2		U	5.00	2.50
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	99.6	86	118		
1,2-Dichloroethane-d4	99.8	80	120		
Toluene-d8	103	88	110		
4-Bromofluorobenzene	106	86	115		

U Not detected at or above adjusted sample detection limit
 J The analyte was positively identified, but the quantitation was below the RL

Sample Number: **L09030649-10**
 Client ID: **16EW05-032709**
 Matrix: **Water**
 Workgroup Number: **WG298625**
 Collect Date: **03/27/2009 08:30**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/31/2009 14:23**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/31/2009 14:23**
 File ID: **10M71466**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	500	125
Benzene	71-43-2		U	50.0	6.25
Bromobenzene	108-86-1		U	50.0	6.25
Bromochloromethane	74-97-5		U	50.0	10.0
Bromodichloromethane	75-27-4		U	50.0	12.5
Bromoform	75-25-2		U	50.0	25.0
Bromomethane	74-83-9		U	50.0	25.0
2-Butanone	78-93-3		U	500	125
n-Butylbenzene	104-51-8		U	50.0	12.5
sec-Butylbenzene	135-98-8		U	50.0	12.5
tert-Butylbenzene	98-06-6		U	50.0	12.5
Carbon disulfide	75-15-0		U	50.0	25.0
Carbon tetrachloride	56-23-5		U	50.0	12.5
Chlorobenzene	108-90-7		U	50.0	6.25
Chlorodibromomethane	124-48-1		U	50.0	12.5
Chloroethane	75-00-3		U	50.0	25.0
2-Chloroethyl vinyl ether	110-75-8		U	500	100
Chloroform	67-66-3		U	50.0	6.25
Chloromethane	74-87-3		U	50.0	12.5
2-Chlorotoluene	95-49-8		U	50.0	6.25
4-Chlorotoluene	106-43-4		U	50.0	12.5
1,2-Dibromo-3-chloropropane	96-12-8		U	250	50.0
1,2-Dibromoethane	106-93-4		U	50.0	12.5
Dibromomethane	74-95-3		U	50.0	12.5
1,2-Dichlorobenzene	95-50-1		U	50.0	6.25
1,3-Dichlorobenzene	541-73-1		U	50.0	12.5
1,4-Dichlorobenzene	106-46-7		U	50.0	6.25
Dichlorodifluoromethane	75-71-8		U	50.0	12.5
1,1-Dichloroethane	75-34-3		U	50.0	6.25
1,2-Dichloroethane	107-06-2	34.0	J	50.0	12.5
1,1-Dichloroethene	75-35-4		U	50.0	25.0
cis-1,2-Dichloroethene	156-59-2	4000		50.0	12.5
trans-1,2-Dichloroethene	156-60-5		U	50.0	12.5
1,2-Dichloropropane	78-87-5		U	50.0	10.0
1,3-Dichloropropane	142-28-9		U	50.0	10.0
2,2-Dichloropropane	594-20-7		U	50.0	12.5
cis-1,3-Dichloropropene	10061-01-5		U	50.0	12.5
trans-1,3-Dichloropropene	10061-02-6		U	50.0	25.0
1,1-Dichloropropene	563-58-6		U	50.0	12.5
Ethylbenzene	100-41-4		U	50.0	12.5
2-Hexanone	591-78-6		U	500	125
Hexachlorobutadiene	87-68-3		U	50.0	12.5
Isopropylbenzene	98-82-8		U	50.0	12.5
p-Isopropyltoluene	99-87-6		U	50.0	12.5
4-Methyl-2-pentanone	108-10-1		U	500	125
Methylene chloride	75-09-2		U	250	12.5
Naphthalene	91-20-3		U	50.0	10.0
n-Propylbenzene	103-65-1		U	50.0	6.25
Styrene	100-42-5		U	50.0	6.25
1,1,1,2-Tetrachloroethane	630-20-6		U	50.0	12.5
1,1,2,2-Tetrachloroethane	79-34-5		U	50.0	6.25
Tetrachloroethene	127-18-4		U	50.0	12.5
Toluene	108-88-3		U	50.0	12.5
1,2,3-Trichlorobenzene	87-61-6		U	50.0	7.50
1,2,4-Trichlorobenzene	120-82-1		U	50.0	10.0
1,1,1-Trichloroethane	71-55-6		U	50.0	12.5
1,1,2-Trichloroethane	79-00-5		U	50.0	12.5
Trichloroethene	79-01-6	9400		50.0	12.5
Trichlorofluoromethane	75-69-4		U	50.0	12.5

Report Number: **L09030649**Report Date : **April 8, 2009**

00087617

Sample Number: **L09030649-10**
 Client ID: **16EW05-032709**
 Matrix: **Water**
 Workgroup Number: **WG298625**
 Collect Date: **03/27/2009 08:30**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/31/2009 14:23**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/31/2009 14:23**
 File ID: **10M71466**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	50.0	25.0
1,2,4-Trimethylbenzene	95-63-6		U	50.0	12.5
1,3,5-Trimethylbenzene	108-67-8		U	50.0	12.5
Vinyl acetate	108-05-4		U	500	125
Vinyl chloride	75-01-4	109		50.0	12.5
o-Xylene	95-47-6		U	50.0	12.5
m-,p-Xylene	136777-61-2		U	50.0	25.0
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	116	86	118		
1,2-Dichloroethane-d4	101	80	120		
Toluene-d8	104	88	110		
4-Bromofluorobenzene	91.8	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

Report Number: **L09030649**Report Date : **April 8, 2009**

00087618

Sample Number: **L09030649-11**
Client ID: **16EW04-032609**
Matrix: **Water**
Workgroup Number: **WG298625**
Collect Date: **03/26/2009 17:05**
Sample Tag: **DL02**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1000**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **03/31/2009 13:50**
Cal Date: **03/18/2009 15:23**
Run Date: **03/31/2009 13:50**
File ID: **10M71465**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Trichloroethene	79-01-6	40700		1000	250
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	115	86	118		
1,2-Dichloroethane-d4	101	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	90.0	86	115		

Sample Number: **L09030649-11**
 Client ID: **16EW04-032609**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/26/2009 17:05**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 19:20**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 19:20**
 File ID: **10M71443**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	500	125
Benzene	71-43-2		U	50.0	6.25
Bromobenzene	108-86-1		U	50.0	6.25
Bromochloromethane	74-97-5		U	50.0	10.0
Bromodichloromethane	75-27-4		U	50.0	12.5
Bromoform	75-25-2		U	50.0	25.0
Bromomethane	74-83-9		U	50.0	25.0
2-Butanone	78-93-3		U	500	125
n-Butylbenzene	104-51-8		U	50.0	12.5
sec-Butylbenzene	135-98-8		U	50.0	12.5
tert-Butylbenzene	98-06-6		U	50.0	12.5
Carbon disulfide	75-15-0		U	50.0	25.0
Carbon tetrachloride	56-23-5		U	50.0	12.5
Chlorobenzene	108-90-7		U	50.0	6.25
Chlorodibromomethane	124-48-1		U	50.0	12.5
Chloroethane	75-00-3		U	50.0	25.0
2-Chloroethyl vinyl ether	110-75-8		U	500	100
Chloroform	67-66-3	9.14	J	50.0	6.25
Chloromethane	74-87-3		U	50.0	12.5
2-Chlorotoluene	95-49-8		U	50.0	6.25
4-Chlorotoluene	106-43-4		U	50.0	12.5
1,2-Dibromo-3-chloropropane	96-12-8		U	250	50.0
1,2-Dibromoethane	106-93-4		U	50.0	12.5
Dibromomethane	74-95-3		U	50.0	12.5
1,2-Dichlorobenzene	95-50-1		U	50.0	6.25
1,3-Dichlorobenzene	541-73-1		U	50.0	12.5
1,4-Dichlorobenzene	106-46-7		U	50.0	6.25
Dichlorodifluoromethane	75-71-8		U	50.0	12.5
1,1-Dichloroethane	75-34-3		U	50.0	6.25
1,2-Dichloroethane	107-06-2	16.7	J	50.0	12.5
1,1-Dichloroethene	75-35-4	55.7		50.0	25.0
cis-1,2-Dichloroethene	156-59-2	8470		50.0	12.5
trans-1,2-Dichloroethene	156-60-5	18.6	J	50.0	12.5
1,2-Dichloropropane	78-87-5		U	50.0	10.0
1,3-Dichloropropane	142-28-9		U	50.0	10.0
2,2-Dichloropropane	594-20-7		U	50.0	12.5
cis-1,3-Dichloropropene	10061-01-5		U	50.0	12.5
trans-1,3-Dichloropropene	10061-02-6		U	50.0	25.0
1,1-Dichloropropene	563-58-6		U	50.0	12.5
Ethylbenzene	100-41-4		U	50.0	12.5
2-Hexanone	591-78-6		U	500	125
Hexachlorobutadiene	87-68-3		U	50.0	12.5
Isopropylbenzene	98-82-8		U	50.0	12.5
p-Isopropyltoluene	99-87-6		U	50.0	12.5
4-Methyl-2-pentanone	108-10-1		U	500	125
Methylene chloride	75-09-2		U	250	12.5
Naphthalene	91-20-3		U	50.0	10.0
n-Propylbenzene	103-65-1		U	50.0	6.25
Styrene	100-42-5		U	50.0	6.25
1,1,1,2-Tetrachloroethane	630-20-6		U	50.0	12.5
1,1,2,2-Tetrachloroethane	79-34-5		U	50.0	6.25
Tetrachloroethene	127-18-4		U	50.0	12.5
Toluene	108-88-3		U	50.0	12.5
1,2,3-Trichlorobenzene	87-61-6		U	50.0	7.50
1,2,4-Trichlorobenzene	120-82-1		U	50.0	10.0
1,1,1-Trichloroethane	71-55-6		U	50.0	12.5
1,1,2-Trichloroethane	79-00-5		U	50.0	12.5
Trichloroethene	79-01-6	48600	I	50.0	12.5
Trichlorofluoromethane	75-69-4		U	50.0	12.5

Sample Number: **L09030649-11**
 Client ID: **16EW04-032609**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/26/2009 17:05**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 19:20**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 19:20**
 File ID: **10M71443**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	50.0	25.0
1,2,4-Trimethylbenzene	95-63-6		U	50.0	12.5
1,3,5-Trimethylbenzene	108-67-8		U	50.0	12.5
Vinyl acetate	108-05-4		U	500	125
Vinyl chloride	75-01-4	54.9		50.0	12.5
o-Xylene	95-47-6		U	50.0	12.5
m-,p-Xylene	136777-61-2		U	50.0	25.0
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	102	86	118		
1,2-Dichloroethane-d4	97.5	80	120		
Toluene-d8	102	88	110		
4-Bromofluorobenzene	89.7	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

I Semiquantitative result (out of instrument calibration range)

Sample Number: **L09030649-12**
Client ID: **16EW03-032609**
Matrix: **Water**
Workgroup Number: **WG298625**
Collect Date: **03/26/2009 13:10**
Sample Tag: **DL02**

PrePrep Method: **NONE**
Prep Method: **5030B**
Analytical Method: **8260B**
Analyst: **TMB**
Dilution: **1000**
Units: **ug/L**

Instrument: **HPMS10**
Prep Date: **03/31/2009 15:27**
Cal Date: **03/18/2009 15:23**
Run Date: **03/31/2009 15:27**
File ID: **10M71468**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	10000	2500
Benzene	71-43-2		U	1000	125
Bromobenzene	108-86-1		U	1000	125
Bromochloromethane	74-97-5		U	1000	200
Bromodichloromethane	75-27-4		U	1000	250
Bromoform	75-25-2		U	1000	500
Bromomethane	74-83-9		U	1000	500
2-Butanone	78-93-3		U	10000	2500
n-Butylbenzene	104-51-8		U	1000	250
sec-Butylbenzene	135-98-8		U	1000	250
tert-Butylbenzene	98-06-6		U	1000	250
Carbon disulfide	75-15-0		U	1000	500
Carbon tetrachloride	56-23-5		U	1000	250
Chlorobenzene	108-90-7		U	1000	125
Chlorodibromomethane	124-48-1		U	1000	250
Chloroethane	75-00-3		U	1000	500
2-Chloroethyl vinyl ether	110-75-8		U	10000	2000
Chloroform	67-66-3		U	1000	125
Chloromethane	74-87-3		U	1000	250
2-Chlorotoluene	95-49-8		U	1000	125
4-Chlorotoluene	106-43-4		U	1000	250
1,2-Dibromo-3-chloropropane	96-12-8		U	5000	1000
1,2-Dibromoethane	106-93-4		U	1000	250
Dibromomethane	74-95-3		U	1000	250
1,2-Dichlorobenzene	95-50-1		U	1000	125
1,3-Dichlorobenzene	541-73-1		U	1000	250
1,4-Dichlorobenzene	106-46-7		U	1000	125
Dichlorodifluoromethane	75-71-8		U	1000	250
1,1-Dichloroethane	75-34-3		U	1000	125
1,2-Dichloroethane	107-06-2		U	1000	250
1,1-Dichloroethene	75-35-4		U	1000	500
cis-1,2-Dichloroethene	156-59-2	8070		1000	250
trans-1,2-Dichloroethene	156-60-5		U	1000	250
1,2-Dichloropropane	78-87-5		U	1000	200
1,3-Dichloropropane	142-28-9		U	1000	200
2,2-Dichloropropane	594-20-7		U	1000	250
cis-1,3-Dichloropropene	10061-01-5		U	1000	250
trans-1,3-Dichloropropene	10061-02-6		U	1000	500
1,1-Dichloropropene	563-58-6		U	1000	250
Ethylbenzene	100-41-4		U	1000	250
2-Hexanone	591-78-6		U	10000	2500
Hexachlorobutadiene	87-68-3		U	1000	250
Isopropylbenzene	98-82-8		U	1000	250
p-Isopropyltoluene	99-87-6		U	1000	250
4-Methyl-2-pentanone	108-10-1		U	10000	2500
Methylene chloride	75-09-2		U	5000	250
Naphthalene	91-20-3		U	1000	200
n-Propylbenzene	103-65-1		U	1000	125
Styrene	100-42-5		U	1000	125
1,1,1,2-Tetrachloroethane	630-20-6		U	1000	250
1,1,2,2-Tetrachloroethane	79-34-5		U	1000	125
Tetrachloroethene	127-18-4		U	1000	250
Toluene	108-88-3		U	1000	250
1,2,3-Trichlorobenzene	87-61-6		U	1000	150
1,2,4-Trichlorobenzene	120-82-1		U	1000	200
1,1,1-Trichloroethane	71-55-6		U	1000	250
1,1,2-Trichloroethane	79-00-5		U	1000	250
Trichloroethene	79-01-6	77400		1000	250
Trichlorofluoromethane	75-69-4		U	1000	250

Report Number: **L09030649**Report Date : **April 8, 2009**

00087622

Sample Number: **L09030649-12**
 Client ID: **16EW03-032609**
 Matrix: **Water**
 Workgroup Number: **WG298625**
 Collect Date: **03/26/2009 13:10**
 Sample Tag: **DL02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **1000**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/31/2009 15:27**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/31/2009 15:27**
 File ID: **10M71468**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1000	500
1,2,4-Trimethylbenzene	95-63-6		U	1000	250
1,3,5-Trimethylbenzene	108-67-8		U	1000	250
Vinyl acetate	108-05-4		U	10000	2500
Vinyl chloride	75-01-4	518	J	1000	250
o-Xylene	95-47-6		U	1000	250
m-,p-Xylene	136777-61-2		U	1000	500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	129	86	118	*	
1,2-Dichloroethane-d4	114	80	120		
Toluene-d8	108	88	110		
4-Bromofluorobenzene	99.9	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

* Surrogate or spike compound out of range

Sample Number: **L09030649-12**
 Client ID: **16EW03-032609**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/26/2009 13:10**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 19:52**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 19:52**
 File ID: **10M71444**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	500	125
Benzene	71-43-2		U	50.0	6.25
Bromobenzene	108-86-1		U	50.0	6.25
Bromochloromethane	74-97-5		U	50.0	10.0
Bromodichloromethane	75-27-4		U	50.0	12.5
Bromoform	75-25-2		U	50.0	25.0
Bromomethane	74-83-9		U	50.0	25.0
2-Butanone	78-93-3		U	500	125
n-Butylbenzene	104-51-8		U	50.0	12.5
sec-Butylbenzene	135-98-8		U	50.0	12.5
tert-Butylbenzene	98-06-6		U	50.0	12.5
Carbon disulfide	75-15-0		U	50.0	25.0
Carbon tetrachloride	56-23-5		U	50.0	12.5
Chlorobenzene	108-90-7		U	50.0	6.25
Chlorodibromomethane	124-48-1		U	50.0	12.5
Chloroethane	75-00-3		U	50.0	25.0
2-Chloroethyl vinyl ether	110-75-8		U	500	100
Chloroform	67-66-3	13.0	J	50.0	6.25
Chloromethane	74-87-3		U	50.0	12.5
2-Chlorotoluene	95-49-8		U	50.0	6.25
4-Chlorotoluene	106-43-4		U	50.0	12.5
1,2-Dibromo-3-chloropropane	96-12-8		U	250	50.0
1,2-Dibromoethane	106-93-4		U	50.0	12.5
Dibromomethane	74-95-3		U	50.0	12.5
1,2-Dichlorobenzene	95-50-1		U	50.0	6.25
1,3-Dichlorobenzene	541-73-1		U	50.0	12.5
1,4-Dichlorobenzene	106-46-7		U	50.0	6.25
Dichlorodifluoromethane	75-71-8		U	50.0	12.5
1,1-Dichloroethane	75-34-3		U	50.0	6.25
1,2-Dichloroethane	107-06-2	32.1	J	50.0	12.5
1,1-Dichloroethene	75-35-4	56.9		50.0	25.0
cis-1,2-Dichloroethene	156-59-2	5840		50.0	12.5
trans-1,2-Dichloroethene	156-60-5	13.0	J	50.0	12.5
1,2-Dichloropropane	78-87-5		U	50.0	10.0
1,3-Dichloropropane	142-28-9		U	50.0	10.0
2,2-Dichloropropane	594-20-7		U	50.0	12.5
cis-1,3-Dichloropropene	10061-01-5		U	50.0	12.5
trans-1,3-Dichloropropene	10061-02-6		U	50.0	25.0
1,1-Dichloropropene	563-58-6		U	50.0	12.5
Ethylbenzene	100-41-4		U	50.0	12.5
2-Hexanone	591-78-6		U	500	125
Hexachlorobutadiene	87-68-3		U	50.0	12.5
Isopropylbenzene	98-82-8		U	50.0	12.5
p-Isopropyltoluene	99-87-6		U	50.0	12.5
4-Methyl-2-pentanone	108-10-1		U	500	125
Methylene chloride	75-09-2	18.5	J	250	12.5
Naphthalene	91-20-3		U	50.0	10.0
n-Propylbenzene	103-65-1		U	50.0	6.25
Styrene	100-42-5		U	50.0	6.25
1,1,1,2-Tetrachloroethane	630-20-6		U	50.0	12.5
1,1,2,2-Tetrachloroethane	79-34-5		U	50.0	6.25
Tetrachloroethene	127-18-4		U	50.0	12.5
Toluene	108-88-3		U	50.0	12.5
1,2,3-Trichlorobenzene	87-61-6		U	50.0	7.50
1,2,4-Trichlorobenzene	120-82-1		U	50.0	10.0
1,1,1-Trichloroethane	71-55-6		U	50.0	12.5
1,1,2-Trichloroethane	79-00-5		U	50.0	12.5
Trichloroethene	79-01-6	55100	I	50.0	12.5
Trichlorofluoromethane	75-69-4		U	50.0	12.5

Sample Number: **L09030649-12**
 Client ID: **16EW03-032609**
 Matrix: **Water**
 Workgroup Number: **WG298505**
 Collect Date: **03/26/2009 13:10**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **50**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/30/2009 19:52**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/30/2009 19:52**
 File ID: **10M71444**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	50.0	25.0
1,2,4-Trimethylbenzene	95-63-6		U	50.0	12.5
1,3,5-Trimethylbenzene	108-67-8		U	50.0	12.5
Vinyl acetate	108-05-4		U	500	125
Vinyl chloride	75-01-4	77.7		50.0	12.5
o-Xylene	95-47-6		U	50.0	12.5
m-,p-Xylene	136777-61-2		U	50.0	25.0
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	102	86	118		
1,2-Dichloroethane-d4	97.6	80	120		
Toluene-d8	101	88	110		
4-Bromofluorobenzene	91.2	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

I Semiquantitative result (out of instrument calibration range)

2.1.1.2 QC Summary Data

Example 8260 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = [(Ax) (Cis)] / [(Ais) (Cx)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured:	3399156
Cis = Concentration of the specific internal standard (ug/mL)	25
Ais = Area of the characteristic ion of the specific internal standard	846471
Cx = Concentration of the compound in the standard being measured (ug/mL)	100

RF = Calculated Response Factor **1.0039**

2.0 Calculating the concentration (C) of a compound in water using the average RF: *

$$Cx = [(Ax) (Cis) (Vn)(D)] / [(Ais) (RF) (Vs)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Vs = Purge volume of sample (mL)	10
Vn = Nominal purge volume of sample (mL) (10.0 mL)	10
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

3.0 Calculating the concentration (C) of a compound in soil using the average RF: *

$$Cx = [(Ax) (Cis) (Wn)(D)] / [(Ais) (RF) (Ws)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Ws = Weight of sample purged (g)	5
Wn = Nominal purge weight (g) (5.0 g)	5
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

Dry weight correction:

Percent solids (PCT_S)	50
Cd = (Cx) (100)/PCT_S	254.4856

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, $y = mx + b$

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve = 0.213

b = intercept from curve = - 0.00642

Step 2: Calculate y from Quantitation Report

$$y = 86550/593147 = 0.1459$$

Step 3: Solve for x

$$x = (y - b)/m = [(0.1459 - (-0.00642))/0.213] = 0.7152$$

Step 4: Solve for analyte concentration Cx

$$Cx = Cis (x) = (25.0)(0.7152) = 17.88$$

Example Spreadsheet Calculation:

Slope from curve, m:	0.213
Intercept from curve, b:	-0.00642
Area of analyte, Ax:	86550
Area of Internal Standard, Ais:	593147
Concentration of IS, Cis	25.00
Response Ratio:	0.145917
Amount Ratio:	0.715195
Concentration:	17.87988
Units of Internal Standard:	ug/L

5.0 Concentration from Quadratic Regression**Step 1 - Retrieve Curve Data from Plot, $y = Ax^2 + Bx + C$**

Where:

$$Ax^2 + Bx + (C - y) = 0$$

A, B, C = constants from the ICAL quadratic regression

y = Response ratio = Area of analyte/Area of internal standard (IS)

x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

$$y = Ax/Ais$$

Step 3: Solve for x using the quadratic formula

$$Ax^2 + Bx + C - y = 0$$

$$x = \frac{b \pm \sqrt{(b^2 - 4a(c - y))}}{2a} \quad (\text{Two possible solutions})$$

Step 4: Solve for analyte concentration Cx

$$Cx = (Cis)(\text{Amount ratio})$$

Example Spreadsheet Calculation:

Value of A from plot:	-0.00629
Value of B from plot:	0.511
Value of C from plot:	-0.0276
Area of unknown from quantitation report:	293821
Area of IS from quantitation report:	784848
Response ratio, y:	0.374367
C - y:	-0.40197
Root 1 - Computed amount ratio, X1:	80.44567
Root 2 - Computed amount ratio, X2:	0.794396 use this solution
Concentration of IS, Cis:	25.00
Concentration of analyte, Cx:	19.86 ug/L

Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031809
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28031

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297559

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71171	SYSTEM BLANK	NA	1	1		03/18/09 07:43
2	10M71172	SYSTEM BLANK	NA	1	1		03/18/09 08:17
3	10M71173	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 08:47
4	10M71174	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 09:00
5	10M71175	WG297559-02 0.3ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:26
6	10M71176	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:58
7	10M71177	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 10:31
8	10M71178	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:03
9	10M71179	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:36
10	10M71180	WG297559-05 2ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:08
11	10M71181	WG297559-06 5ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:40
12	10M71182	WG297559-07 20ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:13
13	10M71183	WG297559-08 50ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:45
14	10M71184	WG297559-09 100ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:17
15	10M71185	WG297559-10 200ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:50
16	10M71186	WG297559-11 300ug/L STD 8260	NA	1	1	STD31848	03/18/09 15:23
17	10M71187	SYSTEM BLANK	NA	1	1		03/18/09 15:55
18	10M71188	SYSTEM BLANK	NA	1	1		03/18/09 16:27
19	10M71189	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/18/09 16:58
20	10M71190	SYSTEM BLANK	NA	1	1		03/18/09 17:30

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X			
File ID: 10M71173				
Tune failed. DNR.				
6	X			
File ID: 10M71176				
No secondary for 123-TCB. DNR.				
9	X			
File ID: 10M71179				
Idomethane didn't show up at all. DNR.				

Approved:



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71192	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 12:01
2	10M71193	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 12:27
3	10M71194	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 13:04
4	10M71195	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 13:36
5	10M71196	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 14:04
6	10M71197	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 14:28
7	10M71198	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 15:01
8	10M71199	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 15:25
9	10M71200	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 15:57
10	10M71201	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 16:33
11	10M71202	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/19/09 17:05
12	10M71203	WG297551-02 20ug/L LCS STD 8260	NA	1	1	STD31819	03/19/09 17:38
13	10M71204	L09030379-13 A 826-SPE	<2	1	1		03/19/09 18:10
14	10M71205	L09030379-01 A 826-SPE	4	1	1		03/19/09 18:42
15	10M71206	L09030379-02 A 826-SPE	5	1	1		03/19/09 19:15
16	10M71207	L09030379-03 A 826-SPE	<2	1	1		03/19/09 19:47
17	10M71208	L09030379-04 A 826-SPE	5	1	1		03/19/09 20:19
18	10M71209	L09030379-05 A 826-SPE	<2	1	1		03/19/09 20:52
19	10M71210	L09030379-06 A 826-SPE	4	1	1		03/19/09 21:24
20	10M71211	L09030379-07 A 826-SPE	5	1	1		03/19/09 21:56
21	10M71212	L09030379-08 A 826-SPE	4	1	1		03/19/09 22:29
22	10M71213	L09030379-09 A MS 826-SPE	3	1	1	STD31819	03/19/09 23:01
23	10M71214	L09030379-10 A MSD 826-SPE	3	1	1	STD31819	03/19/09 23:33
24	10M71215	L09030379-11 A 826-SPE	4	1	1		03/20/09 00:05
25	10M71216	L09030379-12 A 2X 826-SPE	5	1	2		03/20/09 00:38
26	10M71217	L09030379-14 A 826-SPE	7	1	1		03/20/09 01:10
27	10M71218	L09030379-15 A 826-SPE	7	1	1		03/20/09 01:43
28	10M71219	L09030379-16 A 826-SPE	<2	1	1		03/20/09 02:15
29	10M71220	L09030379-17 A 826-SPE	7	1	1		03/20/09 02:48
30	10M71221	SYSTEM BLANK	NA	1	1		03/20/09 03:21
31	10M71222	SYSTEM BLANK	NA	1	1		03/20/09 03:53

Comments

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Over Linear Range	VC
File ID: 10M71193				
VC was low. DNR.				
3	X		Over Linear Range	
File ID: 10M71194				
VC was low. DNR.				
4	X	1	Carry-over contamination	
File ID: 10M71195				
DNR.				
6	X		Over Linear Range	
File ID: 10M71197				
VC was low. DNR.				
9	X	1	Carry-over contamination	
File ID: 10M71200				
DNR.				
14	X	5	Over Calibration Range	2-BUT
File ID: 10M71205				
15	X	10	Over Calibration Range	2-BUT
File ID: 10M71206				
16	X	10	Over Calibration Range	2-BUT
File ID: 10M71207				
17	X	50	Over Calibration Range	2-BUT
File ID: 10M71208				
18	X	1	Carry-over contamination	
File ID: 10M71209				
DNR.				
19	X	10	Over Calibration Range	2-BUT
File ID: 10M71210				
20	X	10	Over Calibration Range	2-BUT
File ID: 10M71211				

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21	X	10	Over Calibration Range	2-BUT
File ID: 10M71212				
24	X	5	Over Calibration Range	2-BUT
File ID: 10M71215				
25	X	10	Over Calibration Range	2-BUT
File ID: 10M71216				
26	X	10	Over Calibration Range	2-BUT
File ID: 10M71217				
27	X	1	Carry-over contamination	
File ID: 10M71218				
DNR.				
28	X	1	Surrogate standard failure	
File ID: 10M71219				
DNR.				
29	X	10	Over Calibration Range	2-BUT
File ID: 10M71220				

Approved: March 23, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS11 Dataset: 032409
 Analyst1: WTD Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11
 Method: 624 SOP: MSV10 Rev: 7
 Maintenance Log ID: 28099

Internal Standard: STD31804 Surrogate Standard: STD31805
 CCV: STD31950 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: 298037

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	11M58014	SYSTEM BLANK	NA	1	1		03/24/09 10:16
2	11M58015	WG298037-02 0.3 ug/L STD	NA	1	1		03/24/09 11:00
3	11M58016	WG298037-03 0.4 ug/L STD	NA	1	1		03/24/09 11:33
4	11M58017	WG298037-03 0.4 ug/L STD	NA	1	1		03/24/09 12:04
5	11M58018	WG298037-04 1.0 ug/L STD	NA	1	1		03/24/09 12:35
6	11M58019	WG298037-05 2.0 ug/L STD	NA	1	1		03/24/09 13:06
7	11M58020	WG298037-06 5.0 ug/L STD	NA	1	1		03/24/09 13:37
8	11M58021	WG298037-07 20 ug/L STD	NA	1	1		03/24/09 14:09
9	11M58022	WG298037-08 50 ug/L STD	NA	1	1		03/24/09 14:40
10	11M58023	WG298037-09 100 ug/L STD	NA	1	1	STD31950	03/24/09 15:11
11	11M58024	WG298037-10 200 ug/L STD	NA	1	1	STD31950	03/24/09 15:42
12	11M58025	WG298037-11 300 ug/L STD	NA	1	1	STD31950	03/24/09 16:13
13	11M58026	SYSTEM BLANK	NA	1	1		03/24/09 16:44
14	11M58027	SYSTEM BLANK	NA	1	1		03/24/09 17:15
15	11M58028	SYSTEM BLANK	NA	1	1		03/24/09 17:46
16	11M58029	WG298037-12 20ug/L ALT SRC	NA	1	1	STD31951	03/24/09 18:17
17	11M58030	WG298037-12 OXY ALT SRC	NA	1	1	STD31951	03/24/09 18:48
18	11M58031	SYSTEM BLANK	NA	1	1		03/24/09 19:19
19	11M58032	SYSTEM BLANK	NA	1	1		03/24/09 19:50

Approved: March 25, 2009

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WTD



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 033009
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28165

Internal Standard: STD31969 Surrogate Standard: STD32024
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298505

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71424	WG298504-01 50ng BFB STD 8260	NA	1	1	STD31709	03/30/09 09:14
2	10M71425	WG298504-02 50ug/L CCV STD 8260	NA	1	1	STD32008	03/30/09 09:38
3	10M71426	WG298505-01 VBLK0330 BLANK STD 826	NA	1	1		03/30/09 10:10
4	10M71427	WG298504-01 50ng BFB STD 8260	NA	1	1	STD31709	03/30/09 10:41
5	10M71428	WG298504-02 50ug/L CCV STD 8260	NA	1	1	STD32008	03/30/09 11:06
6	10M71429	WG298504-02 50ug/L CCV STD 8260	NA	1	1	STD32008	03/30/09 11:45
7	10M71430	WG298505-01 VBLK0330 BLANK STD 826	NA	1	1		03/30/09 12:17
8	10M71431	WG298505-01 VBLK0330 BLANK STD 826	NA	1	1		03/30/09 12:50
9	10M71432	WG298505-02 20ug/L LCS STD 8260	NA	1	1	STD31951	03/30/09 13:22
10	10M71433	WG298505-03 20ug/L LCSDUP STD 8260	NA	1	1	STD31951	03/30/09 13:55
11	10M71434	L09030658-01 A 826-SPE	<2	1	1		03/30/09 14:28
12	10M71435	L09030649-01 A 826-LOW	<2	1	1		03/30/09 15:00
13	10M71436	L09030649-02 A 826-LOW	<2	1	1		03/30/09 15:32
14	10M71437	L09030649-03 A 10X 826-LOW	<2	1	10		03/30/09 16:04
15	10M71438	L09030649-04 A 25X 826-LOW	<2	1	25		03/30/09 16:37
16	10M71439	L09030649-06 A 10X 826-LOW	<2	1	10		03/30/09 17:09
17	10M71440	L09030659-01 A 5X 826-SPE	<2	1	5		03/30/09 17:42
18	10M71441	L09030649-07 A 50X 826-LOW	<2	1	50		03/30/09 18:15
19	10M71442	L09030649-08 A 50X 826-LOW	<2	1	50		03/30/09 18:47
20	10M71443	L09030649-11 A 50X 826-LOW	<2	1	50		03/30/09 19:20
21	10M71444	L09030649-12 A 50X 826-LOW	<2	1	50		03/30/09 19:52
22	10M71445	L09030649-13 A 50X 826-LOW	<2	1	50		03/30/09 20:25
23	10M71446	L09030649-14 A 50X 826-LOW	<2	1	50		03/30/09 20:57
24	10M71447	L09030649-05 A 50X 826-LOW	<2	1	50		03/30/09 21:30
25	10M71448	L09030649-10 A 100X 826-LOW	<2	1	100		03/30/09 22:02
26	10M71449	L09030649-09 A 100X 826-LOW	<2	1	100		03/30/09 22:34
27	10M71450	SYSTEM BLANK	NA	1	1		03/30/09 23:07
28	10M71451	SYSTEM BLANK	NA	1	1		03/30/09 23:39

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Internal standard failure	
File ID: 10M71425				

Approved:



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 033009
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28165

Internal Standard: STD31969 Surrogate Standard: STD32024
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298505

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
			DNR.	
3	X	1	Carry-over contamination	
File ID: 10M71426				
			DNR.	
5	X		Internal standard failure	GASES
File ID: 10M71428				
The gases were low. DNR.				
7	X	1	Carry-over contamination	
File ID: 10M71430				
			DNR.	
14	X	50	Over Calibration Range	TCE
File ID: 10M71437				
15	X	1	Analyzed too dilute	
File ID: 10M71438				
			DNR.	
16	X	10	Surrogate standard failure	
File ID: 10M71439				
17	X	20	Over Calibration Range	ACE
File ID: 10M71440				
18	X	25	Analyzed too dilute	
File ID: 10M71441				
			DNR.	
20	X	1000	Over Calibration Range	TCE
File ID: 10M71443				
21	X	1000	Over Calibration Range	TCE
File ID: 10M71444				
22		1000	Over Calibration Range	TCE
File ID: 10M71445				

Approved:



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 033009
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28165

Internal Standard: STD31969 Surrogate Standard: STD32024
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298505

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
23	X	50	Carry-over contamination	
File ID: 10M71446				
DNR.				
24	X	1	Analyzed too dilute	
File ID: 10M71447				
DNR.				
25	X	50	Analyzed too dilute	
File ID: 10M71448				
DNR.				
26	X	5	Analyzed too dilute	
File ID: 10M71449				
DNR.				

Approved:

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS11 Dataset: 033109
 Analyst1: WTD Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11
 Method: 624 SOP: MSV10 Rev: 7
 Maintenance Log ID: 28180

Internal Standard: STD31804 Surrogate Standard: STD32038
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: 298610

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	11M58202	WG298609-01 BFB 50ng STD 8260	NA	1	1	STD31709	03/31/09 08:52
2	11M58203	WG298609-02 CCV 50ug/L 8260	NA	1	1	STD32008	03/31/09 09:16
3	11M58204	WG298610-01 BLANK 8260	NA	1	1		03/31/09 09:47
4	11M58205	WG298610-01 BLANK 8260	NA	1	1		03/31/09 10:18
5	11M58206	WG298610-02 LCS 20 ug/L 8260	NA	1	1	STD31951	03/31/09 10:50
6	11M58207	L09030589-10 B MS 826-SPE	<2	1	1	STD31951	03/31/09 11:23
7	11M58208	L09030589-11 B MSD 826-SPE	<2	1	1	STD31951	03/31/09 11:54
8	11M58209	L09030589-09 B 826-SPE	<2	1	1		03/31/09 12:26
9	11M58210	L09030649-03 B 50X 826-LOW	<2	1	50		03/31/09 12:57
10	11M58211	L09030649-04 B 826-LOW	<2	1	1		03/31/09 13:28
11	11M58212	L09030649-05 B 826-LOW	<2	1	1		03/31/09 13:59
12	11M58213	L09030649-06 B 10X 826-LOW	<2	1	10		03/31/09 14:30
13	11M58214	L09030649-07 B 25X 826-LOW	<2	1	25		03/31/09 15:01
14	11M58215	L09030649-09 B 5X 826-LOW	<2	1	5		03/31/09 15:32
15	11M58216	L09030589-12 B 826-SPE	<2	1	1		03/31/09 16:03
16	11M58217	L09030589-13 B 826-SPE	<2	1	1		03/31/09 16:34
17	11M58218	L09030589-14 B 826-SPE	<2	1	1		03/31/09 17:05
18	11M58219	L09030589-15 B 826-SPE	<2	1	1		03/31/09 17:36
19	11M58220	L09030589-16 B 826-SPE	<2	1	1		03/31/09 18:08
20	11M58221	L09030563-01 A 200X 826-SPE	<2	1	200		03/31/09 18:39
21	11M58222	L09030569-01 C 20X 826-SPE	<2	1	20		03/31/09 19:10
22	11M58223	L09030569-02 C 10X 826-SPE	<2	1	10		03/31/09 19:41
23	11M58224	L09030569-03 C 826-SPE	<2	1	1		03/31/09 20:12
24	11M58225	L09030569-04 C 10X 826-SPE	<2	1	10		03/31/09 20:43
25	11M58226	SYSTEM BLANK	NA	1	1		03/31/09 21:14
26	11M58227	SYSTEM BLANK	NA	1	1		03/31/09 21:45

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X		Carry-over contamination	
File ID: 11M58204				
dnr				
20				

Approved: April 01, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS11 Dataset: 033109
Analyst1: WTD Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 12
Method: 5030B/5035 SOP: PAT01 Rev: 11
Method: 624 SOP: MSV10 Rev: 7
Maintenance Log ID: 28180

Internal Standard: STD31804 Surrogate Standard: STD32038
CCV: STD32008 LCS: STD31951 MS/MSD: NA
Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: 298610

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 11M58221				
This sample ran originally on HPMS11 on 03/25/09, acetone and 4-methyl-2-pentanone were over calibration range. The "B" vial was analyzed on 03/26/09 at 50X, the acetone and 4-methyl-2-pentanone were over calibration range. The "A" vial was then diluted at 200x for this analytical run. The sample does not appear to be homogeneous between the "A" and "B" vials.				

Approved: April 01, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 033109
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28179

Internal Standard: STD31969 Surrogate Standard: STD32024
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298625

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71453	SYSTEM BLANK	NA	1	1		03/31/09 07:54
2	10M71454	SYSTEM BLANK	NA	1	1		03/31/09 08:32
3	10M71455	WG298624-01 50ng BFB STD 8260	NA	1	1	STD31709	03/31/09 09:01
4	10M71456	WG298624-02 50ug/L CCV STD 8260	NA	1	1	STD32008	03/31/09 09:25
5	10M71457	WG298625-01 VBLK0331 BLANK STD 826	NA	1	1		03/31/09 09:58
6	10M71458	WG298624-01 50ng BFB STD 8260	NA	1	1	STD31709	03/31/09 10:30
7	10M71459	WG298624-01 50ng BFB STD 8260	NA	1	1	STD31709	03/31/09 10:44
8	10M71460	WG298624-02 50ug/L CCV STD 8260	NA	1	1	STD32008	03/31/09 11:08
9	10M71461	WG298625-01 VBLK0331 BLANK STD 826	NA	1	1		03/31/09 11:41
10	10M71462	WG298625-01 VBLK0331 BLANK STD 826	NA	1	1		03/31/09 12:13
11	10M71463	WG298625-02 20ug/L LCS STD 8260	NA	1	1	STD31951	03/31/09 12:46
12	10M71464	WG298625-03 20ug/L LCSDUP STD 8260	NA	1	1	STD31951	03/31/09 13:18
13	10M71465	L09030649-11 B 1000X D1 826-LOW	<2	1	1000		03/31/09 13:50
14	10M71466	L09030649-10 B 50X 826-LOW 00	<2	1	50		03/31/09 14:23
15	10M71467	L09030649-14 B 50X 826-LOW 00	<2	1	50		03/31/09 14:55
16	10M71468	L09030649-12 B 1000X 826-LOW D1	<2	1	1000		03/31/09 15:27
17	10M71469	L09030649-13 B 1000X 826-LOW D1	<2	1	1000		03/31/09 16:00
18	10M71470	L09030659-01 B 20X 826-SPE D1	<2	1	20		03/31/09 16:32
19	10M71471	L09030643-02 A 826-SPE	<2	1	1		03/31/09 17:04
20	10M71472	L09030661-01 A 826-BETX	<2	1	1		03/31/09 17:37
21	10M71473	L09030557-09 A 826-SPLP	<2	18	1		03/31/09 18:09
22	10M71474	L09030643-04 A 826-SPLP	<2	18	1		03/31/09 18:41
23	10M71475	L09030643-06 A 826-SPLP	<2	18	1		03/31/09 19:14
24	10M71476	L09030594-06 A 826-SPLP	<2	18	1		03/31/09 19:46
25	10M71477	L09030594-03 A 826-SPLP	7	18	1		03/31/09 20:18
26	10M71478	L09030652-02 A 826-BETX	7	1	1		03/31/09 20:50
27	10M71479	L09030671-01 A 500X 826-LOW	<2	1	500		03/31/09 21:23
28	10M71480	L09030671-02 A 100X 826-LOW	<2	1	100		03/31/09 21:55
29	10M71481	L09030597-02 A 1000X 826-TC	<2	17	1000		03/31/09 22:27
30	10M71482	SYSTEM BLANK	NA	1	1		03/31/09 23:00
31	10M71483	SYSTEM BLANK	NA	1	1		03/31/09 23:32

Comments

Approved: April 01, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 033109
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28179

Internal Standard: STD31969 Surrogate Standard: STD32024
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298625

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
4	X			EB
File ID: 10M71456				
EB was high. DNR.				
5	X	1	Carry-over contamination	
File ID: 10M71457				
dnr.				
6	X			
File ID: 10M71458				
Tune failed. DNR.				
9	X	1	Carry-over contamination	
File ID: 10M71461				
DNR.				
15	X	200	Over Calibration Range	tce
File ID: 10M71467				
25	X	1	Surrogate standard failure	
File ID: 10M71477				
28	X	1	Analyzed too dilute	
File ID: 10M71480				
DNR.				
29	X	10	Analyzed too dilute	
File ID: 10M71481				
DNR.				

Approved: April 01, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS11 Dataset: 040209
 Analyst1: WTD Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11
 Method: 624 SOP: MSV10 Rev: 7
 Maintenance Log ID: 28211

Internal Standard: STD31804 Surrogate Standard: STD32038
 CCV: STD32043 LCS: STD32056 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: 298842, 298922

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	11M58254	WG298841-01 BFB 50ng STD 8260	NA	1	1	STD31709	04/02/09 08:46
2	11M58255	WG298841-02 CCV 50ug/L 8260	NA	1	1	STD32043	04/02/09 09:09
3	11M58256	WG298842-01 BLANK 8260	NA	1	1		04/02/09 09:41
4	11M58257	WG298842-01 BLANK 8260	NA	1	1		04/02/09 10:12
5	11M58258	WG298842-02 LCS 20ug/L 8260	NA	1	1	STD32056	04/02/09 10:43
6	11M58259	WG298842-03 LCSD 20ug/L 8260	NA	1	1	STD32056	04/02/09 11:14
7	11M58260	WG298789 SPLP FLUID BLANK	NA	18	1		04/02/09 11:46
8	11M58261	L09040009-02 M 826-SPLP-SPE	NA	18	1		04/02/09 12:17
9	11M58262	L09030649-14 B 200X 826-LOW	<2	1	200		04/02/09 12:48
10	11M58263	L09030452-02 B 250X 826-LOW	7	1	250		04/02/09 13:19
11	11M58264	L09030686-07 B 826-LOW	<2	1	1		04/02/09 13:50
12	11M58265	L09030686-06 B 826-LOW	<2	1	1		04/02/09 14:21
13	11M58266	L09030654-04 A 826-SPE	<2	1	1		04/02/09 14:52
14	11M58267	L09040016-02 A 826-LOW	<2	1	1		04/02/09 15:23
15	11M58268	L09040032-05 A 826-BETX	<2	1	1		04/02/09 15:54
16	11M58269	L09040027-01 A 826-SPE	<2	1	1		04/02/09 16:25
17	11M58270	L09040016-01 A 826-LOW	<2	1	1		04/02/09 16:56
18	11M58271	L09040016-03 A 826-LOW	<2	1	1		04/02/09 17:27
19	11M58272	L09040016-04 A 826-LOW	<2	1	1		04/02/09 17:58
20	11M58273	L09040016-05 A 826-LOW	<2	1	1		04/02/09 18:29
21	11M58274	L09030654-02 B 826-SPE	<2	1	1		04/02/09 19:00
22	11M58275	L09040016-07 A 2X 826-LOW	<2	1	2		04/02/09 19:31
23	11M58276	L09040016-08 A 2X 826-LOW	<2	1	2		04/02/09 20:03
24	11M58277	L09040032-04 A 826-BETX	7	1	1		04/02/09 20:34
25	11M58278	SYSTEM BLANK	NA	1	1		04/02/09 21:05
26	11M58279	SYSTEM BLANK	NA	1	1		04/02/09 21:36
27	11M58280	WG298922-02 LCS 20ug/L 624	NA	2	1	STD32056	04/02/09 22:07
28	11M58281	WG298922-03 LCSD 20ug/L 624	NA	2	1	STD32056	04/02/09 22:38
29	11M58282	SYSTEM BLANK	NA	2	1		04/02/09 23:09
30	11M58283	WG298922-01 BLANK 624	NA	2	1		04/02/09 23:40
31	11M58284	L09040019-01 A 100X 642-SPE	7	2	100		04/03/09 00:12
32	11M58285	L09040019-02 A 100X 642-SPE	7	2	100		04/03/09 00:43
33	11M58286	L09040038-29 A 642-SPE	7	2	1		04/03/09 01:14
34	11M58287	L09040018-01 A 642-SPE4	7	2	1		04/03/09 01:45

Approved: April 03, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS11 Dataset: 040209
 Analyst1: WTD Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11
 Method: 624 SOP: MSV10 Rev: 7
 Maintenance Log ID: 28211

Internal Standard: STD31804 Surrogate Standard: STD32038
 CCV: STD32043 LCS: STD32056 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: 298842, 298922

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
35	11M58288	L09040026-01 A 642-SPE	7	2	1		04/03/09 02:16
36	11M58289	L09040038-11 A 642-SPE	7	2	1		04/03/09 02:47
37	11M58290	L09040038-12 A 642-SPE	7	2	1		04/03/09 03:19
38	11M58291	L09040038-13 A 642-SPE	7	2	1		04/03/09 03:50
39	11M58292	L09040038-14 A 642-SPE	7	2	1		04/03/09 04:21
40	11M58293	L09040038-15 A 642-SPE	7	2	1		04/03/09 04:52
41	11M58294	L09040038-16 A 642-SPE	7	2	1		04/03/09 05:23
42	11M58295	L09040038-17 A 642-SPE	7	2	1		04/03/09 05:54
43	11M58296	L09040038-18 A 642-SPE	7	2	1		04/03/09 06:25
44	11M58297	L09040038-19 A 642-SPE	7	2	1		04/03/09 06:56
45	11M58298	SYSTEM BLANK	NA	2	1		04/03/09 07:27

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X		Carry-over contamination	
File ID: 11M58256				
23	X	1	Analyzed too dilute	
File ID: 11M58276				
31	X	1	Analyzed too dilute	
File ID: 11M58284				
32	X	20	Analyzed too dilute	
File ID: 11M58285				

Approved: April 03, 2009

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WTD



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS11 Dataset: 040709
 Analyst1: WTD Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11
 Method: 624 SOP: MSV10 Rev: 7
 Maintenance Log ID: 28260

Internal Standard: STD31804 Surrogate Standard: STD32038
 CCV: STD32157 LCS: STD32158 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: 299157

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	11M58369	WG299155-01 BFB 50ng STD 8260	NA	1	1	STD31709	04/07/09 10:24
2	11M58370	WG299155-02 CCV 50ug/L 8260	NA	1	1	STD32157	04/07/09 10:48
3	11M58371	WG299155-02 CCV 50ug/L 8260	NA	1	1	STD32157	04/07/09 11:20
4	11M58372	WG299157-01 BLANK 8260	NA	1	1		04/07/09 11:51
5	11M58373	WG299157-01 BLANK 8260	NA	1	1		04/07/09 12:23
6	11M58374	WG299157-02 LCS 20ug/L 8260	NA	1	1	STD32158	04/07/09 12:54
7	11M58375	L09040108-02 A MS 826-SPE	<2	1	1	STD32158	04/07/09 13:24
8	11M58376	L09040108-03 A MSD 826-SPE	<2	1	1	STD32158	04/07/09 13:55
9	11M58377	SYSTEM BLANK	NA	1	1		04/07/09 14:26
10	11M58378	L09040108-01 A 826-SPE	<2	1	1		04/07/09 14:57
11	11M58379	L09040142-01 A 250X 826-LOW	<2	1	250		04/07/09 15:28
12	11M58380	L09040142-02 A 100X 826-LOW	<2	1	100		04/07/09 15:59
13	11M58381	L09040142-03 A 100X 826-LOW	<2	1	100		04/07/09 16:31
14	11M58382	L09040142-04 A 100X 826-SPE	<2	1	100		04/07/09 17:02
15	11M58383	L09040142-05 A 826-SPE	<2	1	1		04/07/09 17:33
16	11M58384	L09040108-05 A 826-SPE	<2	1	1		04/07/09 18:04
17	11M58385	L09040142-08 A 826-LOW	<2	1	1		04/07/09 18:35
18	11M58386	L09040112-03 A 826-SPE	<2	1	1		04/07/09 19:06
19	11M58387	L09040108-04 A 826-SPE	<2	1	1		04/07/09 19:37
20	11M58388	L09040112-01 A 826-SPE	<2	1	1		04/07/09 20:08
21	11M58389	L09040112-04 A 826-SPE	<2	1	1		04/07/09 20:40
22	11M58390	L09030649-07 C 50X 826-LOW	<2	1	50		04/07/09 21:11
23	11M58391	L09040099-10 B 100X 826-BETX	<2	1	100		04/07/09 21:42
24	11M58392	L09040016-14 B 2X 826-SPE	<2	1	2		04/07/09 22:13

Comments

Seq.	Rerun	Dil.	Reason	Analytes
4	X		Carry-over contamination	
File ID: 11M58372				
dnr				
11	X	100	Analyzed too dilute	
File ID: 11M58379				
12	X	50	Analyzed too dilute	

Approved: April 08, 2009

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WTD



Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS11 Dataset: 040709
Analyst1: WTD Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 12
Method: 5030B/5035 SOP: PAT01 Rev: 11
Method: 624 SOP: MSV10 Rev: 7
Maintenance Log ID: 28260

Internal Standard: STD31804 Surrogate Standard: STD32038
CCV: STD32157 LCS: STD32158 MS/MSD: NA
Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: 299157

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
File ID: 11M58380				
13	X	50	Analyzed too dilute	
File ID: 11M58381				
14	X	5	Analyzed too dilute	
File ID: 11M58382				
21	X	10	Over Calibration Range	vinyl chloride, cis-1,2-dichloroethene, trichloroethene, tetrachloroethene
File ID: 11M58389				

Approved: April 08, 2009

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Microbac Laboratories Inc.

Data Checklist

Date: 18-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27121

Analytical Workgroups: WG297559

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the reasonableness of the results	

Primary Reviewer:
19-MAR-2009

Tiffany Bailey

Secondary Reviewer:

Microbac Laboratories Inc.

Data Checklist

Date: 19-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27161

Analytical Workgroups: WG297551

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
20-MAR-2009

Tiffany Bailey

Secondary Reviewer:
23-MAR-2009

MDA

Microbac Laboratories Inc.

Data Checklist

Date: 24-MAR-2009

Analyst: WTD

Analyst: NA

Method: 8260

Instrument: HPMS11

Curve Workgroup: NA

Runlog ID: 27216

Analytical Workgroups: 298037

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	
Reruns	
Manual Integrations	
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	WTD
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
25-MAR-2009

Secondary Reviewer:
25-MAR-2009

Microbac Laboratories Inc.

Data Checklist

Date: 30-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27310

Analytical Workgroups: WG298505

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
31-MAR-2009

Tiffany Bailey

Secondary Reviewer:
31-MAR-2009

MDA

Microbac Laboratories Inc.

Data Checklist

Date: 31-MAR-2009

Analyst: WTD

Analyst: NA

Method: 8260

Instrument: HPMS11

Curve Workgroup: NA

Runlog ID: 27329

Analytical Workgroups: 298610

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	WTD
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
01-APR-2009

Secondary Reviewer:
01-APR-2009

Microbac Laboratories Inc.

Data Checklist

Date: 31-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27332

Analytical Workgroups: WG298625

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
31-MAR-2009

Tiffany Bailey

Secondary Reviewer:
01-APR-2009

MDA

Data Checklist

Date: 02-APR-2009

Analyst: WTD

Analyst: NA

Method: 8260

Instrument: HPMS11

Curve Workgroup: NA

Runlog ID: 27375

Analytical Workgroups: 298842, 298922

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	WTD
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
03-APR-2009

Secondary Reviewer:
03-APR-2009

Microbac Laboratories Inc.

Data Checklist

Date: 07-APR-2009

Analyst: WTD

Analyst: NA

Method: 8260

Instrument: HPMS11

Curve Workgroup: NA

Runlog ID: 27440

Analytical Workgroups: 299157

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	WTD
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
08-APR-2009

Secondary Reviewer:
08-APR-2009

Analytical Method: 8260B

AAB#: WG298505

Login Number: L09030649

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW41-032409	03/24/09	03/28/09	03/30/09	14	6.22	03/30/09	14	6.22	
16EW07-032709	03/27/09	03/28/09	03/30/09	14	3.18	03/30/09	14	3.18	
16WW21-032409-FD	03/24/09	03/28/09	03/30/09	14	6.22	03/30/09	14	6.22	
16EW03-032609	03/26/09	03/28/09	03/30/09	14	4.28	03/30/09	14	4.28	
16WW21-032409	03/24/09	03/28/09	03/30/09	14	6.20	03/30/09	14	6.20	
16EW02-032609	03/26/09	03/28/09	03/30/09	14	4.35	03/30/09	14	4.35	
16EW04-032609	03/26/09	03/28/09	03/30/09	14	4.09	03/30/09	14	4.09	

* EXT = SEE PROJECT QAPP REQUIREMENTS

*ANAL = SEE PROJECT QAPP REQUIREMENTS

Analytical Method: 8260B

AAB#: WG298610

Login Number: L09030649

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW41-032409	03/24/09	03/28/09	03/31/09	14	7.09	03/31/09	14	7.09	
16WW40-032409	03/24/09	03/28/09	03/31/09	14	6.96	03/31/09	14	6.96	
16WW31-032409	03/24/09	03/28/09	03/31/09	14	7.03	03/31/09	14	7.03	
16EW08-032709	03/27/09	03/28/09	03/31/09	14	3.94	03/31/09	14	3.94	
16EW06-032709	03/27/09	03/28/09	03/31/09	14	4.18	03/31/09	14	4.18	
16WW42-032409	03/24/09	03/28/09	03/31/09	14	6.97	03/31/09	14	6.97	

* EXT = SEE PROJECT QAPP REQUIREMENTS

*ANAL = SEE PROJECT QAPP REQUIREMENTS

Analytical Method: 8260B

AAB#: WG298625

Login Number: L09030649

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16EW02-032609	03/26/09	03/28/09	03/31/09	14	5.17	03/31/09	14	5.17	
16EW05-032709	03/27/09	03/28/09	03/31/09	14	4.25	03/31/09	14	4.25	
16EW03-032609	03/26/09	03/28/09	03/31/09	14	5.10	03/31/09	14	5.10	
16EW04-032609	03/26/09	03/28/09	03/31/09	14	4.86	03/31/09	14	4.86	
16EW01-032609	03/26/09	03/28/09	03/31/09	14	5.20	03/31/09	14	5.20	

* EXT = SEE PROJECT QAPP REQUIREMENTS

*ANAL = SEE PROJECT QAPP REQUIREMENTS

Analytical Method: 8260B

AAB#: WG298842

Login Number: L09030649

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16EW01-032609	03/26/09	03/28/09	04/02/09	14	7.12	04/02/09	14	7.12	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Analytical Method: 8260B

AAB#: WG299157

Login Number: L09030649

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16EW08-032709	03/27/09	03/28/09	04/07/09	14	11.2	04/07/09	14	11.2	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Login Number: L09030649
Instrument Id: HPMS10
Workgroup (AAB#): WG298505

Method: 8260
CAL ID: HPMS10 - 18-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030649-01	1.00	01	99.7	118	90.4	102
L09030649-02	1.00	01	103	118	86.7	98.8
L09030649-03	10.0	DL01	101	113	88.5	101
L09030649-08	50.0	DL01	104	<u>121</u>	88.7	102
L09030649-11	50.0	DL01	97.5	102	89.7	102
L09030649-12	50.0	DL01	97.6	102	91.2	101
L09030649-13	50.0	DL01	97.8	93.4	87.3	103
WG298505-01	1.00	01	100	117	89.0	99.9
WG298505-02	1.00	01	94.4	100	95.6	96.8
WG298505-03	1.00	01	95.7	102	100	94.5

Surrogates	Surrogate Limits
1 - 1,2-Dichloroethane-d4	80 - 120
2 - Dibromofluoromethane	86 - 118
3 - 4-Bromofluorobenzene	86 - 115
4 - Toluene-d8	88 - 110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

Login Number: L09030649
Instrument Id: HPMS11
Workgroup (AAB#): WG298610

Method: 8260
CAL ID: HPMS11 - 24-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030649-03	50.0	DL02	100	102	104	102
L09030649-04	1.00	01	102	102	107	102
L09030649-05	1.00	01	99.1	101	106	102
L09030649-06	10.0	DL01	102	101	107	104
L09030649-07	25.0	DL01	99.9	103	106	103
L09030649-09	5.00	DL01	99.8	99.6	106	103
WG298610-01	1.00	01	99.0	102	105	103
WG298610-02	1.00	01	103	103	104	101

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

Login Number: L09030649
Instrument Id: HPMS11
Workgroup (AAB#): WG299157

Method: 8260
CAL ID: HPMS11 - 24-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030649-07	50.0	DL02	107	102	109	103
WG299157-01	1.00	01	99.2	101	110	102
WG299157-02	1.00	01	101	104	102	99.8

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

Login Number: L09030649
Instrument Id: HPMS11
Workgroup (AAB#): WG298842

Method: 8260
CAL ID: HPMS11 - 24-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030649-14	200	DL03	102	102	110	102
WG298842-01	1.00	01	98.2	102	108	102
WG298842-02	1.00	01	101	101	105	103
WG298842-03	1.00	01	102	103	105	100

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

Login Number: L09030649
Instrument Id: HPMS10
Workgroup (AAB#): WG298625

Method: 8260
CAL ID: HPMS10 - 18-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030649-10	50.0	DL01	101	116	91.8	104
L09030649-11	1000	DL02	101	115	90.0	102
L09030649-12	1000	DL02	114	<u>129</u>	99.9	108
L09030649-13	1000	DL02	111	<u>129</u>	98.4	108
L09030649-14	50.0	DL01	112	<u>120</u>	99.3	110
WG298625-01	1.00	01	105	<u>121</u>	89.7	102
WG298625-02	1.00	01	99.2	102	96.8	97.0
WG298625-03	1.00	01	96.2	104	99.6	98.1

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

METHOD BLANK SUMMARY

Login Number: <u>L09030649</u>	Work Group: <u>WG298505</u>
Blank File ID: <u>10M71431</u>	Blank Sample ID: <u>WG298505-01</u>
Prep Date: <u>03/30/09 12:50</u>	Instrument ID: <u>HPMS10</u>
Analyzed Date: <u>03/30/09 12:50</u>	Method: <u>8260B</u>
Analyst: <u>TMB</u>	

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298505-02	10M71432	03/30/09 13:22	01
LCS2	WG298505-03	10M71433	03/30/09 13:55	01
16WW21-032409	L09030649-01	10M71435	03/30/09 15:00	01
16WW21-032409-FD	L09030649-02	10M71436	03/30/09 15:32	01
16WW41-032409	L09030649-03	10M71437	03/30/09 16:04	DL01
16EW07-032709	L09030649-08	10M71442	03/30/09 18:47	DL01
16EW04-032609	L09030649-11	10M71443	03/30/09 19:20	DL01
16EW03-032609	L09030649-12	10M71444	03/30/09 19:52	DL01
16EW02-032609	L09030649-13	10M71445	03/30/09 20:25	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1355038
 Report generated 04/08/2009 08:43



METHOD BLANK SUMMARY

Login Number: L09030649
 Blank File ID: 10M71462
 Prep Date: 03/31/09 12:13
 Analyzed Date: 03/31/09 12:13
 Analyst: TMB

Work Group: WG298625
 Blank Sample ID: WG298625-01
 Instrument ID: HPMS10
 Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298625-02	10M71463	03/31/09 12:46	01
LCS2	WG298625-03	10M71464	03/31/09 13:18	01
16EW04-032609	L09030649-11	10M71465	03/31/09 13:50	DL02
16EW05-032709	L09030649-10	10M71466	03/31/09 14:23	DL01
16EW01-032609	L09030649-14	10M71467	03/31/09 14:55	DL01
16EW03-032609	L09030649-12	10M71468	03/31/09 15:27	DL02
16EW02-032609	L09030649-13	10M71469	03/31/09 16:00	DL02

Report Name: BLANK_SUMMARY
 PDF File ID: 1355038
 Report generated 04/08/2009 08:43



METHOD BLANK SUMMARY

Login Number: L09030649
 Blank File ID: 11M58205
 Prep Date: 03/31/09 10:18
 Analyzed Date: 03/31/09 10:18
 Analyst: WTD

Work Group: WG298610
 Blank Sample ID: WG298610-01
 Instrument ID: HPMS11
 Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298610-02	11M58206	03/31/09 10:50	01
16WW41-032409	L09030649-03	11M58210	03/31/09 12:57	DL02
16WW42-032409	L09030649-04	11M58211	03/31/09 13:28	01
16WW31-032409	L09030649-05	11M58212	03/31/09 13:59	01
16WW40-032409	L09030649-06	11M58213	03/31/09 14:30	DL01
16EW08-032709	L09030649-07	11M58214	03/31/09 15:01	DL01
16EW06-032709	L09030649-09	11M58215	03/31/09 15:32	DL01

Report Name: BLANK_SUMMARY
 PDF File ID: 1355038
 Report generated 04/08/2009 08:43



METHOD BLANK SUMMARY

Login Number: L09030649
Blank File ID: 11M58257
Prep Date: 04/02/09 10:12
Analyzed Date: 04/02/09 10:12
Analyst: WTD

Work Group: WG298842
Blank Sample ID: WG298842-01
Instrument ID: HPMS11
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298842-02	11M58258	04/02/09 10:43	01
LCS2	WG298842-03	11M58259	04/02/09 11:14	01
16EW01-032609	L09030649-14	11M58262	04/02/09 12:48	DL03

Report Name: BLANK_SUMMARY
PDF File ID: 1355038
Report generated 04/08/2009 08:43



METHOD BLANK SUMMARY

Login Number: L09030649
Blank File ID: 11M58373
Prep Date: 04/07/09 12:23
Analyzed Date: 04/07/09 12:23
Analyst: WTD

Work Group: WG299157
Blank Sample ID: WG299157-01
Instrument ID: HPMS11
Method: 8260B

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG299157-02	11M58374	04/07/09 12:54	01
16EW08-032709	L09030649-07	11M58390	04/07/09 21:11	DL02

Report Name: BLANK_SUMMARY
PDF File ID: 1355038
Report generated 04/08/2009 08:43



Login Number: L09030649 Prep Date: 03/30/09 12:50 Sample ID: WG298505-01
Instrument ID: HPMS10 Run Date: 03/30/09 12:50 Prep Method: 5030B
File ID: 10M71431 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298505 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1355119

08-APR-2009 08:43



Login Number: L09030649 Prep Date: 03/30/09 12:50 Sample ID: WG298505-01
Instrument ID: HPMS10 Run Date: 03/30/09 12:50 Prep Method: 5030B
File ID: 10M71431 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298505 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	117	86 - 118	PASS
1,2-Dichloroethane-d4	100	80 - 120	PASS
Toluene-d8	99.9	88 - 110	PASS
4-Bromofluorobenzene	89.0	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1355119
08-APR-2009 08:43



Login Number: L09030649 Prep Date: 03/31/09 12:13 Sample ID: WG298625-01
Instrument ID: HPMS10 Run Date: 03/31/09 12:13 Prep Method: 5030B
File ID: 10M71462 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298625 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

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Login Number: L09030649 Prep Date: 03/31/09 12:13 Sample ID: WG298625-01
Instrument ID: HPMS10 Run Date: 03/31/09 12:13 Prep Method: 5030B
File ID: 10M71462 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298625 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	121	86 - 118	FAIL
1,2-Dichloroethane-d4	105	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	89.7	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1355119
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Login Number: L09030649 Prep Date: 03/31/09 10:18 Sample ID: WG298610-01
Instrument ID: HPMS11 Run Date: 03/31/09 10:18 Prep Method: 5030B
File ID: 11M58205 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG298610 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS11 - 24-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.462	1	J
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1355119

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Login Number: L09030649 Prep Date: 03/31/09 10:18 Sample ID: WG298610-01
Instrument ID: HPMS11 Run Date: 03/31/09 10:18 Prep Method: 5030B
File ID: 11M58205 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG298610 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS11 - 24-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	86 - 118	PASS
1,2-Dichloroethane-d4	99.0	80 - 120	PASS
Toluene-d8	103	88 - 110	PASS
4-Bromofluorobenzene	105	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
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Login Number: L09030649 Prep Date: 04/02/09 10:12 Sample ID: WG298842-01
Instrument ID: HPMS11 Run Date: 04/02/09 10:12 Prep Method: 5030B
File ID: 11M58257 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG298842 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS11 - 24-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1355119

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Login Number: L09030649 Prep Date: 04/02/09 10:12 Sample ID: WG298842-01
Instrument ID: HPMS11 Run Date: 04/02/09 10:12 Prep Method: 5030B
File ID: 11M58257 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG298842 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS11 - 24-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.312	1	J
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	102	86 - 118	PASS
1,2-Dichloroethane-d4	98.2	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	108	86 - 115	PASS

SDL Method Detection Limit

PQL Reporting/Practical Quantitation Limit

ND Analyte Not detected at or above reporting limit

* |Analyte concentration| > RL

Report Name: BLANK

PDF ID: 1355119

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Login Number: L09030649 Prep Date: 04/07/09 12:23 Sample ID: WG299157-01
Instrument ID: HPMS11 Run Date: 04/07/09 12:23 Prep Method: 5030B
File ID: 11M58373 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG299157 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS11 - 24-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1355119

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Login Number: L09030649 Prep Date: 04/07/09 12:23 Sample ID: WG299157-01
Instrument ID: HPMS11 Run Date: 04/07/09 12:23 Prep Method: 5030B
File ID: 11M58373 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG299157 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS11 - 24-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.363	1	J
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	101	86 - 118	PASS
1,2-Dichloroethane-d4	99.2	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	110	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1355119
08-APR-2009 08:43



Login Number: L09030649 Run Date: 03/31/2009 Sample ID: WG298610-02
Instrument ID: HPMS11 Run Time: 10:50 Prep Method: 5030B
File ID: 11M58206 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG298610 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD31951 Cal ID: HPMS11 - 24-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits			Q
Acetone	20.0	24.0	120	40	-	142	
Benzene	20.0	19.3	96.3	80	-	121	
Bromobenzene	20.0	20.0	100	80	-	120	
Bromochloromethane	20.0	19.6	98.1	65	-	130	
Bromodichloromethane	20.0	21.3	107	80	-	131	
Bromoform	20.0	17.6	88.0	70	-	130	
Bromomethane	20.0	7.21	36.1	30	-	145	
2-Butanone	20.0	29.4	147	30	-	150	
n-Butylbenzene	20.0	22.7	113	80	-	131	
sec-Butylbenzene	20.0	21.1	106	80	-	127	
tert-Butylbenzene	20.0	20.5	103	80	-	126	
Carbon disulfide	20.0	18.5	92.7	58	-	138	
Carbon tetrachloride	20.0	21.0	105	65	-	140	
Chlorobenzene	20.0	19.1	95.3	80	-	120	
Chlorodibromomethane	20.0	20.4	102	60	-	135	
Chloroethane	20.0	19.3	96.6	60	-	135	
2-Chloroethyl vinyl ether	20.0	31.6	158	58	-	151	*
Chloroform	20.0	20.5	103	80	-	125	
Chloromethane	20.0	24.4	122	40	-	125	
2-Chlorotoluene	20.0	20.7	104	80	-	127	
4-Chlorotoluene	20.0	20.9	104	80	-	126	
1,2-Dibromo-3-chloropropane	20.0	22.7	113	50	-	130	
1,2-Dibromoethane	20.0	20.4	102	80	-	125	
Dibromomethane	20.0	19.8	98.9	75	-	125	
1,2-Dichlorobenzene	20.0	19.5	97.6	80	-	125	
1,3-Dichlorobenzene	20.0	19.7	98.4	80	-	120	
1,4-Dichlorobenzene	20.0	18.7	93.3	80	-	120	
Dichlorodifluoromethane	20.0	10.3	51.6	50	-	133	
1,1-Dichloroethane	20.0	20.8	104	80	-	125	
1,2-Dichloroethane	20.0	21.0	105	80	-	129	
1,1-Dichloroethene	20.0	20.2	101	80	-	132	
cis-1,2-Dichloroethene	20.0	20.1	100	70	-	125	
trans-1,2-Dichloroethene	20.0	19.5	97.5	80	-	127	
1,2-Dichloropropane	20.0	20.3	101	80	-	120	
1,3-Dichloropropane	20.0	20.5	103	80	-	120	
2,2-Dichloropropane	20.0	23.4	117	80	-	133	
cis-1,3-Dichloropropene	20.0	20.8	104	70	-	130	
trans-1,3-Dichloropropene	20.0	19.4	97.0	80	-	130	
1,1-Dichloropropene	20.0	19.9	99.3	75	-	130	
Ethylbenzene	20.0	19.8	99.2	80	-	122	
2-Hexanone	20.0	21.2	106	55	-	130	

LCS - Modified 03/06/2008
PDF File ID: 1355068
Report generated: 04/08/2009 08:43



Login Number: L09030649 Run Date: 03/31/2009 Sample ID: WG298610-02
Instrument ID: HPMS11 Run Time: 10:50 Prep Method: 5030B
File ID: 11M58206 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG298610 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD31951 Cal ID: HPMS11 - 24-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits			Q
Hexachlorobutadiene	20.0	20.8	104	72	-	132	
Isopropylbenzene	20.0	17.5	87.3	80	-	122	
p-Isopropyltoluene	20.0	20.4	102	80	-	122	
4-Methyl-2-pentanone	20.0	21.4	107	64	-	140	
Methylene chloride	20.0	19.9	99.6	80	-	123	
Naphthalene	20.0	19.5	97.4	59	-	149	
n-Propylbenzene	20.0	21.8	109	80	-	129	
Styrene	20.0	20.2	101	80	-	123	
1,1,1,2-Tetrachloroethane	20.0	20.0	99.9	80	-	130	
1,1,2,2-Tetrachloroethane	20.0	21.6	108	79	-	125	
Tetrachloroethene	20.0	18.8	93.9	80	-	124	
Toluene	20.0	20.2	101	80	-	124	
1,2,3-Trichlorobenzene	20.0	19.8	98.9	55	-	140	
1,2,4-Trichlorobenzene	20.0	20.2	101	65	-	135	
1,1,1-Trichloroethane	20.0	20.5	102	80	-	134	
1,1,2-Trichloroethane	20.0	20.5	103	80	-	125	
Trichloroethene	20.0	18.2	91.2	80	-	122	
Trichlorofluoromethane	20.0	19.2	95.9	62	-	151	
1,2,3-Trichloropropane	20.0	20.2	101	75	-	125	
1,2,4-Trimethylbenzene	20.0	21.4	107	80	-	125	
1,3,5-Trimethylbenzene	20.0	21.2	106	80	-	127	
Vinyl acetate	20.0	21.8	109	10	-	150	
Vinyl chloride	20.0	17.8	89.1	65	-	140	
o-Xylene	20.0	20.0	100	80	-	122	
m-,p-Xylene	40.0	40.2	100	80	-	122	

Surrogates	% Recovery	Surrogate Limits			Qualifier
Dibromofluoromethane	103	86	-	118	PASS
1,2-Dichloroethane-d4	103	80	-	120	PASS
Toluene-d8	101	88	-	110	PASS
4-Bromofluorobenzene	104	86	-	115	PASS

* FAILS %REC LIMIT

Login Number: L09030649 Run Date: 04/07/2009 Sample ID: WG299157-02
Instrument ID: HPMS11 Run Time: 12:54 Prep Method: 5030B
File ID: 11M58374 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG299157 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD32158 Cal ID: HPMS11 - 24-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits			Q
Acetone	20.0	19.2	95.8	40	-	142	
Benzene	20.0	20.9	104	80	-	121	
Bromobenzene	20.0	19.8	98.9	80	-	120	
Bromochloromethane	20.0	20.9	105	65	-	130	
Bromodichloromethane	20.0	22.4	112	80	-	131	
Bromoform	20.0	17.5	87.6	70	-	130	
Bromomethane	20.0	18.5	92.6	30	-	145	
2-Butanone	20.0	18.9	94.5	30	-	150	
n-Butylbenzene	20.0	22.6	113	80	-	131	
sec-Butylbenzene	20.0	21.6	108	80	-	127	
tert-Butylbenzene	20.0	21.0	105	80	-	126	
Carbon disulfide	20.0	18.7	93.7	58	-	138	
Carbon tetrachloride	20.0	22.5	113	65	-	140	
Chlorobenzene	20.0	19.4	97.2	80	-	120	
Chlorodibromomethane	20.0	20.6	103	60	-	135	
Chloroethane	20.0	23.0	115	60	-	135	
2-Chloroethyl vinyl ether	20.0	29.7	148	58	-	151	
Chloroform	20.0	21.5	107	80	-	125	
Chloromethane	20.0	23.6	118	40	-	125	
2-Chlorotoluene	20.0	20.9	105	80	-	127	
4-Chlorotoluene	20.0	21.1	106	80	-	126	
1,2-Dibromo-3-chloropropane	20.0	20.5	102	50	-	130	
1,2-Dibromoethane	20.0	19.8	99.1	80	-	125	
Dibromomethane	20.0	20.6	103	75	-	125	
1,2-Dichlorobenzene	20.0	19.0	95.2	80	-	125	
1,3-Dichlorobenzene	20.0	19.6	98.2	80	-	120	
1,4-Dichlorobenzene	20.0	18.9	94.4	80	-	120	
Dichlorodifluoromethane	20.0	21.7	109	50	-	133	
1,1-Dichloroethane	20.0	22.1	110	80	-	125	
1,2-Dichloroethane	20.0	21.6	108	80	-	129	
1,1-Dichloroethene	20.0	22.6	113	80	-	132	
cis-1,2-Dichloroethene	20.0	21.3	107	70	-	125	
trans-1,2-Dichloroethene	20.0	22.8	114	80	-	127	
1,2-Dichloropropane	20.0	21.6	108	80	-	120	
1,3-Dichloropropane	20.0	20.4	102	80	-	120	
2,2-Dichloropropane	20.0	24.7	123	80	-	133	
cis-1,3-Dichloropropene	20.0	21.6	108	70	-	130	
trans-1,3-Dichloropropene	20.0	18.9	94.5	80	-	130	
1,1-Dichloropropene	20.0	21.9	110	75	-	130	
Ethylbenzene	20.0	20.3	102	80	-	122	
2-Hexanone	20.0	19.2	95.9	55	-	130	

LCS - Modified 03/06/2008
PDF File ID: 1355068
Report generated: 04/08/2009 08:43



Login Number: L09030649 Run Date: 04/07/2009 Sample ID: WG299157-02
Instrument ID: HPMS11 Run Time: 12:54 Prep Method: 5030B
File ID: 11M58374 Analyst: WTD Method: 8260B
Workgroup (AAB#): WG299157 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD32158 Cal ID: HPMS11 - 24-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits	Q
Hexachlorobutadiene	20.0	19.9	99.3	72 - 132	
Isopropylbenzene	20.0	18.1	90.5	80 - 122	
p-Isopropyltoluene	20.0	20.3	102	80 - 122	
4-Methyl-2-pentanone	20.0	19.5	97.3	64 - 140	
Methylene chloride	20.0	21.2	106	80 - 123	
Naphthalene	20.0	18.3	91.6	59 - 149	
n-Propylbenzene	20.0	22.0	110	80 - 129	
Styrene	20.0	20.5	103	80 - 123	
1,1,1,2-Tetrachloroethane	20.0	20.5	102	80 - 130	
1,1,2,2-Tetrachloroethane	20.0	20.9	104	79 - 125	
Tetrachloroethene	20.0	19.6	98.0	80 - 124	
Toluene	20.0	20.6	103	80 - 124	
1,2,3-Trichlorobenzene	20.0	18.7	93.7	55 - 140	
1,2,4-Trichlorobenzene	20.0	19.4	97.0	65 - 135	
1,1,1-Trichloroethane	20.0	21.9	110	80 - 134	
1,1,2-Trichloroethane	20.0	20.2	101	80 - 125	
Trichloroethene	20.0	19.5	97.3	80 - 122	
Trichlorofluoromethane	20.0	22.1	111	62 - 151	
1,2,3-Trichloropropane	20.0	19.1	95.5	75 - 125	
1,2,4-Trimethylbenzene	20.0	21.6	108	80 - 125	
1,3,5-Trimethylbenzene	20.0	21.2	106	80 - 127	
Vinyl acetate	20.0	28.4	142	10 - 150	
Vinyl chloride	20.0	22.6	113	65 - 140	
o-Xylene	20.0	20.1	101	80 - 122	
m-,p-Xylene	40.0	41.4	104	80 - 122	

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	104	86 - 118	PASS
1,2-Dichloroethane-d4	101	80 - 120	PASS
Toluene-d8	99.8	88 - 110	PASS
4-Bromofluorobenzene	102	86 - 115	PASS

* FAILS %REC LIMIT

Login Number: L09030649 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298625 Units: ug/L
QC Key: STD Lot #: STD31951

Sample ID: WG298625-02 LCS File ID: 10M71463 Run Date: 03/31/2009 12:46
Sample ID: WG298625-03 LCS2 File ID: 10M71464 Run Date: 03/31/2009 13:18

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	26.8	134	20.0	25.5	128	4.84	40 - 142	20	
Benzene	20.0	21.2	106	20.0	21.2	106	0.435	80 - 121	20	
Bromobenzene	20.0	24.2	121	20.0	24.4	122	0.603	80 - 120	20	*
Bromochloromethane	20.0	22.1	110	20.0	21.4	107	2.89	65 - 130	20	
Bromodichloromethane	20.0	23.8	119	20.0	23.7	118	0.372	80 - 131	20	
Bromoform	20.0	24.0	120	20.0	23.5	117	2.31	70 - 130	20	
Bromomethane	20.0	20.9	105	20.0	21.5	107	2.68	30 - 145	20	
2-Butanone	20.0	25.9	130	20.0	24.3	122	6.30	30 - 150	20	
n-Butylbenzene	20.0	24.1	120	20.0	25.6	128	6.06	80 - 131	20	
sec-Butylbenzene	20.0	22.8	114	20.0	23.6	118	3.30	80 - 127	20	
tert-Butylbenzene	20.0	19.8	99.0	20.0	20.7	103	4.21	80 - 126	20	
Carbon disulfide	20.0	19.7	98.3	20.0	19.2	96.0	2.32	58 - 138	20	
Carbon tetrachloride	20.0	21.0	105	20.0	21.4	107	1.85	65 - 140	20	
Chlorobenzene	20.0	22.2	111	20.0	22.4	112	0.783	80 - 120	20	
Chlorodibromomethane	20.0	21.5	108	20.0	22.0	110	2.28	60 - 135	20	
Chloroethane	20.0	18.8	94.1	20.0	19.8	98.9	4.99	60 - 135	20	
2-Chloroethyl vinyl ether	20.0	21.5	107	20.0	20.7	104	3.58	58 - 151	20	
Chloroform	20.0	21.4	107	20.0	21.5	107	0.470	80 - 125	20	
Chloromethane	20.0	21.1	106	20.0	20.0	100	5.61	40 - 125	20	
2-Chlorotoluene	20.0	23.3	117	20.0	24.3	122	4.17	80 - 127	20	
4-Chlorotoluene	20.0	21.0	105	20.0	21.5	107	2.20	80 - 126	20	
1,2-Dibromo-3-chloropropane	20.0	22.6	113	20.0	22.6	113	0.113	50 - 130	20	
1,2-Dibromoethane	20.0	22.2	111	20.0	22.5	113	1.45	80 - 125	20	
Dibromomethane	20.0	23.2	116	20.0	22.7	113	2.57	75 - 125	20	
1,2-Dichlorobenzene	20.0	23.0	115	20.0	24.1	121	4.87	80 - 125	20	
1,3-Dichlorobenzene	20.0	23.0	115	20.0	23.8	119	3.48	80 - 120	20	
1,4-Dichlorobenzene	20.0	21.0	105	20.0	21.9	109	4.35	80 - 120	20	
Dichlorodifluoromethane	20.0	19.7	98.7	20.0	20.2	101	2.33	50 - 133	20	
1,1-Dichloroethane	20.0	21.5	108	20.0	21.5	107	0.208	80 - 125	20	
1,2-Dichloroethane	20.0	22.7	113	20.0	22.4	112	1.26	80 - 129	20	
1,1-Dichloroethene	20.0	20.7	103	20.0	21.0	105	1.64	80 - 132	20	
cis-1,2-Dichloroethene	20.0	21.8	109	20.0	22.2	111	1.63	70 - 125	20	
trans-1,2-Dichloroethene	20.0	21.0	105	20.0	21.0	105	0.0586	80 - 127	20	
1,2-Dichloropropane	20.0	21.6	108	20.0	21.6	108	0.127	80 - 120	20	
1,3-Dichloropropane	20.0	21.3	106	20.0	22.1	110	3.72	80 - 120	20	
2,2-Dichloropropane	20.0	19.6	97.9	20.0	19.4	97.1	0.772	80 - 133	20	
cis-1,3-Dichloropropene	20.0	21.8	109	20.0	21.9	110	0.550	70 - 130	20	
trans-1,3-Dichloropropene	20.0	19.0	94.9	20.0	19.1	95.6	0.680	80 - 130	20	
1,1-Dichloropropene	20.0	21.1	105	20.0	21.5	108	1.90	75 - 130	20	
Ethylbenzene	20.0	23.2	116	20.0	23.8	119	2.54	80 - 122	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1354028
Report generated: 04/08/2009 08:43



Login Number: L09030649 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298625 Units: ug/L
QC Key: STD Lot #: STD31951

Sample ID: WG298625-02 LCS File ID: 10M71463 Run Date: 03/31/2009 12:46
Sample ID: WG298625-03 LCS2 File ID: 10M71464 Run Date: 03/31/2009 13:18

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2-Hexanone	20.0	26.9	135	20.0	26.6	133	1.29	55 - 130	20	*
Hexachlorobutadiene	20.0	23.1	115	20.0	24.2	121	4.68	72 - 132	20	
Isopropylbenzene	20.0	16.5	82.5	20.0	16.4	82.1	0.416	80 - 122	20	
p-Isopropyltoluene	20.0	21.5	108	20.0	22.6	113	4.99	80 - 122	20	
4-Methyl-2-pentanone	20.0	25.8	129	20.0	24.8	124	3.99	64 - 140	20	
Methylene chloride	20.0	22.4	112	20.0	22.5	112	0.614	80 - 123	20	
Naphthalene	20.0	24.2	121	20.0	25.8	129	6.02	59 - 149	20	
n-Propylbenzene	20.0	21.6	108	20.0	22.4	112	3.55	80 - 129	20	
Styrene	20.0	20.9	104	20.0	21.0	105	0.795	80 - 123	20	
1,1,1,2-Tetrachloroethane	20.0	20.0	100	20.0	20.1	100	0.329	80 - 130	20	
1,1,2,2-Tetrachloroethane	20.0	23.5	118	20.0	24.2	121	3.01	79 - 125	20	
Tetrachloroethene	20.0	20.8	104	20.0	21.7	108	4.08	80 - 124	20	
Toluene	20.0	22.0	110	20.0	22.4	112	1.59	80 - 124	20	
1,2,3-Trichlorobenzene	20.0	20.9	104	20.0	22.4	112	7.13	55 - 140	20	
1,2,4-Trichlorobenzene	20.0	26.3	132	20.0	27.5	138	4.33	65 - 135	20	*
1,1,1-Trichloroethane	20.0	21.3	107	20.0	21.5	107	0.711	80 - 134	20	
1,1,2-Trichloroethane	20.0	21.8	109	20.0	21.7	109	0.200	80 - 125	20	
Trichloroethene	20.0	21.4	107	20.0	21.5	107	0.558	80 - 122	20	
Trichlorofluoromethane	20.0	20.3	101	20.0	20.4	102	0.797	62 - 151	20	
1,2,3-Trichloropropane	20.0	24.4	122	20.0	24.4	122	0.128	75 - 125	20	
1,2,4-Trimethylbenzene	20.0	25.1	125	20.0	26.3	131	4.63	80 - 125	20	*
1,3,5-Trimethylbenzene	20.0	21.9	110	20.0	22.8	114	3.84	80 - 127	20	
Vinyl acetate	20.0	16.7	83.5	20.0	16.3	81.3	2.63	10 - 150	20	
Vinyl chloride	20.0	21.9	110	20.0	21.9	110	0.103	65 - 140	20	
o-Xylene	20.0	21.2	106	20.0	21.7	108	2.40	80 - 122	20	
m-, p-Xylene	40.0	42.1	105	40.0	42.4	106	0.638	80 - 122	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	99.2	96.2	80 - 120	PASS
Dibromofluoromethane	102	104	86 - 118	PASS
4-Bromofluorobenzene	96.8	99.6	86 - 115	PASS
Toluene-d8	97.0	98.1	88 - 110	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1354028
Report generated: 04/08/2009 08:43



Login Number: L09030649 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298505 Units: ug/L
QC Key: STD Lot #: STD31951

Sample ID: WG298505-02 LCS File ID: 10M71432 Run Date: 03/30/2009 13:22
Sample ID: WG298505-03 LCS2 File ID: 10M71433 Run Date: 03/30/2009 13:55

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	23.5	118	20.0	25.8	129	9.23	40 - 142	20	
Benzene	20.0	19.8	98.8	20.0	19.8	98.8	0.0460	80 - 121	20	
Bromobenzene	20.0	22.6	113	20.0	23.0	115	1.91	80 - 120	20	
Bromochloromethane	20.0	20.1	100	20.0	20.9	105	4.16	65 - 130	20	
Bromodichloromethane	20.0	21.5	107	20.0	22.2	111	3.36	80 - 131	20	
Bromoform	20.0	22.3	111	20.0	23.4	117	4.81	70 - 130	20	
Bromomethane	20.0	19.0	95.0	20.0	20.0	99.8	4.86	30 - 145	20	
2-Butanone	20.0	23.5	118	20.0	25.2	126	6.92	30 - 150	20	
n-Butylbenzene	20.0	22.7	113	20.0	23.0	115	1.17	80 - 131	20	
sec-Butylbenzene	20.0	21.2	106	20.0	21.6	108	1.68	80 - 127	20	
tert-Butylbenzene	20.0	18.1	90.4	20.0	18.2	91.2	0.884	80 - 126	20	
Carbon disulfide	20.0	19.1	95.4	20.0	19.3	96.5	1.16	58 - 138	20	
Carbon tetrachloride	20.0	19.5	97.4	20.0	19.4	96.8	0.559	65 - 140	20	
Chlorobenzene	20.0	20.9	104	20.0	20.8	104	0.614	80 - 120	20	
Chlorodibromomethane	20.0	20.8	104	20.0	20.7	104	0.289	60 - 135	20	
Chloroethane	20.0	18.8	93.9	20.0	18.7	93.3	0.572	60 - 135	20	
2-Chloroethyl vinyl ether	20.0	19.6	97.9	20.0	20.0	99.8	1.95	58 - 151	20	
Chloroform	20.0	19.8	99.2	20.0	20.0	99.9	0.679	80 - 125	20	
Chloromethane	20.0	17.6	88.0	20.0	17.8	89.0	1.20	40 - 125	20	
2-Chlorotoluene	20.0	21.1	106	20.0	22.0	110	4.06	80 - 127	20	
4-Chlorotoluene	20.0	20.2	101	20.0	20.5	103	1.31	80 - 126	20	
1,2-Dibromo-3-chloropropane	20.0	20.8	104	20.0	23.3	117	11.3	50 - 130	20	
1,2-Dibromoethane	20.0	21.3	107	20.0	21.5	107	0.791	80 - 125	20	
Dibromomethane	20.0	21.2	106	20.0	21.8	109	2.66	75 - 125	20	
1,2-Dichlorobenzene	20.0	21.7	108	20.0	21.9	109	0.887	80 - 125	20	
1,3-Dichlorobenzene	20.0	21.9	109	20.0	22.0	110	0.515	80 - 120	20	
1,4-Dichlorobenzene	20.0	20.0	100	20.0	20.2	101	1.09	80 - 120	20	
Dichlorodifluoromethane	20.0	19.6	97.8	20.0	19.8	99.0	1.14	50 - 133	20	
1,1-Dichloroethane	20.0	19.7	98.7	20.0	19.9	99.4	0.708	80 - 125	20	
1,2-Dichloroethane	20.0	20.7	104	20.0	21.1	105	1.60	80 - 129	20	
1,1-Dichloroethene	20.0	19.8	98.9	20.0	20.1	101	1.65	80 - 132	20	
cis-1,2-Dichloroethene	20.0	20.3	102	20.0	21.0	105	3.06	70 - 125	20	
trans-1,2-Dichloroethene	20.0	19.6	97.9	20.0	19.7	98.6	0.692	80 - 127	20	
1,2-Dichloropropane	20.0	19.8	99.1	20.0	20.2	101	1.95	80 - 120	20	
1,3-Dichloropropane	20.0	20.1	101	20.0	20.5	102	1.71	80 - 120	20	
2,2-Dichloropropane	20.0	18.2	90.9	20.0	18.8	94.1	3.42	80 - 133	20	
cis-1,3-Dichloropropene	20.0	20.5	102	20.0	21.0	105	2.50	70 - 130	20	
trans-1,3-Dichloropropene	20.0	17.9	89.4	20.0	18.2	91.0	1.70	80 - 130	20	
1,1-Dichloropropene	20.0	19.8	99.0	20.0	20.3	102	2.61	75 - 130	20	
Ethylbenzene	20.0	21.4	107	20.0	22.2	111	3.73	80 - 122	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1354028
Report generated: 04/08/2009 08:43



Login Number: L09030649 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298505 Units: ug/L
QC Key: STD Lot #: STD31951

Sample ID: WG298505-02 LCS File ID: 10M71432 Run Date: 03/30/2009 13:22
Sample ID: WG298505-03 LCS2 File ID: 10M71433 Run Date: 03/30/2009 13:55

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2-Hexanone	20.0	24.8	124	20.0	27.7	138	11.0	55 - 130	20	*
Hexachlorobutadiene	20.0	22.0	110	20.0	22.5	113	2.38	72 - 132	20	
Isopropylbenzene	20.0	14.9	74.7	20.0	15.9	79.4	6.17	80 - 122	20	*
p-Isopropyltoluene	20.0	20.4	102	20.0	20.7	103	1.44	80 - 122	20	
4-Methyl-2-pentanone	20.0	23.0	115	20.0	24.5	123	6.52	64 - 140	20	
Methylene chloride	20.0	21.0	105	20.0	21.0	105	0.243	80 - 123	20	
Naphthalene	20.0	23.8	119	20.0	26.1	130	9.11	59 - 149	20	
n-Propylbenzene	20.0	19.8	99.1	20.0	20.1	100	1.29	80 - 129	20	
Styrene	20.0	19.9	99.4	20.0	20.1	100	0.891	80 - 123	20	
1,1,1,2-Tetrachloroethane	20.0	18.8	93.9	20.0	18.7	93.4	0.581	80 - 130	20	
1,1,2,2-Tetrachloroethane	20.0	21.6	108	20.0	22.8	114	5.05	79 - 125	20	
Tetrachloroethene	20.0	20.0	99.8	20.0	19.8	99.2	0.649	80 - 124	20	
Toluene	20.0	20.8	104	20.0	20.5	103	1.38	80 - 124	20	
1,2,3-Trichlorobenzene	20.0	20.5	103	20.0	21.8	109	6.25	55 - 140	20	
1,2,4-Trichlorobenzene	20.0	25.9	129	20.0	26.9	135	3.96	65 - 135	20	
1,1,1-Trichloroethane	20.0	19.9	99.3	20.0	20.0	99.9	0.542	80 - 134	20	
1,1,2-Trichloroethane	20.0	20.8	104	20.0	20.7	103	0.685	80 - 125	20	
Trichloroethene	20.0	19.8	99.2	20.0	20.4	102	2.89	80 - 122	20	
Trichlorofluoromethane	20.0	18.9	94.7	20.0	19.3	96.6	1.93	62 - 151	20	
1,2,3-Trichloropropane	20.0	22.8	114	20.0	23.5	117	2.88	75 - 125	20	
1,2,4-Trimethylbenzene	20.0	23.6	118	20.0	23.7	119	0.496	80 - 125	20	
1,3,5-Trimethylbenzene	20.0	20.6	103	20.0	20.8	104	0.994	80 - 127	20	
Vinyl acetate	20.0	16.1	80.7	20.0	16.7	83.4	3.33	10 - 150	20	
Vinyl chloride	20.0	19.1	95.6	20.0	19.0	95.0	0.681	65 - 140	20	
o-Xylene	20.0	19.7	98.7	20.0	20.4	102	3.50	80 - 122	20	
m-, p-Xylene	40.0	39.7	99.2	40.0	40.5	101	2.08	80 - 122	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	94.4	95.7	80 - 120	PASS
Dibromofluoromethane	100	102	86 - 118	PASS
4-Bromofluorobenzene	95.6	100	86 - 115	PASS
Toluene-d8	96.8	94.5	88 - 110	PASS

* FAILS %REC LIMIT

FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1354028
Report generated: 04/08/2009 08:43



Login Number: L09030649 Analyst: WTD Prep Method: 5030B
Instrument ID: HPMS11 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298842 Units: ug/L
QC Key: STD Lot #: STD32056

Sample ID: WG298842-02 LCS File ID: 11M58258 Run Date: 04/02/2009 10:43
Sample ID: WG298842-03 LCS2 File ID: 11M58259 Run Date: 04/02/2009 11:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	21.0	105	20.0	22.6	113	7.45	40 - 142	20	
Benzene	20.0	20.9	104	20.0	20.1	101	3.64	80 - 121	20	
Bromobenzene	20.0	20.5	103	20.0	20.2	101	1.28	80 - 120	20	
Bromochloromethane	20.0	21.0	105	20.0	20.8	104	0.922	65 - 130	20	
Bromodichloromethane	20.0	22.7	113	20.0	22.2	111	2.11	80 - 131	20	
Bromoform	20.0	18.6	92.8	20.0	18.6	93.1	0.388	70 - 130	20	
Bromomethane	20.0	20.3	102	20.0	20.5	102	0.699	30 - 145	20	
2-Butanone	20.0	28.4	142	20.0	28.4	142	0.230	30 - 150	20	
n-Butylbenzene	20.0	24.5	123	20.0	23.3	116	5.28	80 - 131	20	
sec-Butylbenzene	20.0	22.7	113	20.0	21.9	110	3.46	80 - 127	20	
tert-Butylbenzene	20.0	21.7	109	20.0	20.9	105	3.73	80 - 126	20	
Carbon disulfide	20.0	19.9	99.4	20.0	19.0	95.0	4.58	58 - 138	20	
Carbon tetrachloride	20.0	22.4	112	20.0	21.4	107	4.57	65 - 140	20	
Chlorobenzene	20.0	20.4	102	20.0	19.5	97.5	4.45	80 - 120	20	
Chlorodibromomethane	20.0	21.9	110	20.0	21.6	108	1.57	60 - 135	20	
Chloroethane	20.0	22.6	113	20.0	22.3	112	1.48	60 - 135	20	
2-Chloroethyl vinyl ether	20.0	30.5	153	20.0	31.1	156	1.96	58 - 151	20	*
Chloroform	20.0	21.4	107	20.0	21.1	105	1.69	80 - 125	20	
Chloromethane	20.0	23.0	115	20.0	22.2	111	3.37	40 - 125	20	
2-Chlorotoluene	20.0	21.0	105	20.0	21.8	109	3.87	80 - 127	20	
4-Chlorotoluene	20.0	21.9	110	20.0	21.1	106	3.72	80 - 126	20	
1,2-Dibromo-3-chloropropane	20.0	22.6	113	20.0	23.6	118	4.44	50 - 130	20	
1,2-Dibromoethane	20.0	20.8	104	20.0	20.8	104	0.0280	80 - 125	20	
Dibromomethane	20.0	20.6	103	20.0	20.6	103	0.0737	75 - 125	20	
1,2-Dichlorobenzene	20.0	20.4	102	20.0	19.9	99.6	2.49	80 - 125	20	
1,3-Dichlorobenzene	20.0	20.9	104	20.0	20.0	100	3.95	80 - 120	20	
1,4-Dichlorobenzene	20.0	19.9	99.3	20.0	19.6	98.0	1.33	80 - 120	20	
Dichlorodifluoromethane	20.0	21.7	109	20.0	20.8	104	4.39	50 - 133	20	
1,1-Dichloroethane	20.0	22.2	111	20.0	21.4	107	4.04	80 - 125	20	
1,2-Dichloroethane	20.0	21.4	107	20.0	21.5	108	0.275	80 - 129	20	
1,1-Dichloroethene	20.0	22.1	111	20.0	21.3	107	3.82	80 - 132	20	
cis-1,2-Dichloroethene	20.0	21.9	109	20.0	21.0	105	4.07	70 - 125	20	
trans-1,2-Dichloroethene	20.0	21.0	105	20.0	20.1	100	4.22	80 - 127	20	
1,2-Dichloropropane	20.0	21.3	107	20.0	21.1	105	1.16	80 - 120	20	
1,3-Dichloropropane	20.0	21.8	109	20.0	21.5	108	1.52	80 - 120	20	
2,2-Dichloropropane	20.0	24.8	124	20.0	23.5	118	5.47	80 - 133	20	
cis-1,3-Dichloropropene	20.0	22.1	110	20.0	21.8	109	1.26	70 - 130	20	
trans-1,3-Dichloropropene	20.0	20.1	100	20.0	19.8	99.2	1.27	80 - 130	20	
1,1-Dichloropropene	20.0	22.0	110	20.0	21.1	105	4.10	75 - 130	20	
Ethylbenzene	20.0	21.4	107	20.0	20.2	101	5.75	80 - 122	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1354028
Report generated: 04/08/2009 08:43



Login Number: L09030649 Analyst: WTD Prep Method: 5030B
Instrument ID: HPMS11 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298842 Units: ug/L
QC Key: STD Lot #: STD32056

Sample ID: WG298842-02 LCS File ID: 11M58258 Run Date: 04/02/2009 10:43
Sample ID: WG298842-03 LCS2 File ID: 11M58259 Run Date: 04/02/2009 11:14

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2-Hexanone	20.0	20.2	101	20.0	21.1	105	4.02	55 - 130	20	
Hexachlorobutadiene	20.0	21.9	110	20.0	21.5	107	2.00	72 - 132	20	
Isopropylbenzene	20.0	19.3	96.7	20.0	18.0	90.1	7.14	80 - 122	20	
p-Isopropyltoluene	20.0	21.6	108	20.0	20.7	103	4.57	80 - 122	20	
4-Methyl-2-pentanone	20.0	20.8	104	20.0	21.6	108	4.11	64 - 140	20	
Methylene chloride	20.0	21.3	107	20.0	21.5	107	0.707	80 - 123	20	
Naphthalene	20.0	20.2	101	20.0	20.5	102	1.59	59 - 149	20	
n-Propylbenzene	20.0	23.4	117	20.0	22.3	112	4.71	80 - 129	20	
Styrene	20.0	21.8	109	20.0	20.6	103	5.73	80 - 123	20	
1,1,1,2-Tetrachloroethane	20.0	21.7	108	20.0	20.3	102	6.27	80 - 130	20	
1,1,2,2-Tetrachloroethane	20.0	22.5	112	20.0	22.5	113	0.311	79 - 125	20	
Tetrachloroethene	20.0	20.3	101	20.0	19.0	94.9	6.64	80 - 124	20	
Toluene	20.0	21.8	109	20.0	20.5	103	5.84	80 - 124	20	
1,2,3-Trichlorobenzene	20.0	20.6	103	20.0	20.4	102	1.18	55 - 140	20	
1,2,4-Trichlorobenzene	20.0	21.0	105	20.0	20.8	104	0.677	65 - 135	20	
1,1,1-Trichloroethane	20.0	22.0	110	20.0	21.4	107	2.81	80 - 134	20	
1,1,2-Trichloroethane	20.0	21.4	107	20.0	20.6	103	3.70	80 - 125	20	
Trichloroethene	20.0	19.3	96.7	20.0	18.4	92.0	4.96	80 - 122	20	
Trichlorofluoromethane	20.0	22.0	110	20.0	21.3	106	3.36	62 - 151	20	
1,2,3-Trichloropropane	20.0	20.5	103	20.0	20.8	104	1.58	75 - 125	20	
1,2,4-Trimethylbenzene	20.0	22.3	112	20.0	21.8	109	2.32	80 - 125	20	
1,3,5-Trimethylbenzene	20.0	22.4	112	20.0	21.8	109	2.71	80 - 127	20	
Vinyl acetate	20.0	20.0	99.8	20.0	20.3	101	1.62	10 - 150	20	
Vinyl chloride	20.0	22.5	112	20.0	21.0	105	6.80	65 - 140	20	
o-Xylene	20.0	21.1	106	20.0	20.3	101	4.03	80 - 122	20	
m-, p-Xylene	40.0	43.3	108	40.0	40.9	102	5.77	80 - 122	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	101	102	80 - 120	PASS
Dibromofluoromethane	101	103	86 - 118	PASS
4-Bromofluorobenzene	105	105	86 - 115	PASS
Toluene-d8	103	100	88 - 110	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1354028
Report generated: 04/08/2009 08:43



BFB

Login Number: L09030649
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297559

Tune ID: WG297559-01
Run Date: 03/18/2009
Run Time: 09:00
File ID: 10M71174

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.0	5747	PASS
75.0	95.0	30.0	60.0	47.9	10994	PASS
95.0	95.0	100	100	100	22949	PASS
96.0	95.0	5.00	9.00	6.91	1585	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	92.1	21128	PASS
175	174	5.00	9.00	7.12	1504	PASS
176	174	95.0	101	97.0	20489	PASS
177	176	5.00	9.00	7.42	1521	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-02	STD	01	03/18/2009 09:26	
WG297559-04	STD	01	03/18/2009 10:31	
WG297559-03	STD	01	03/18/2009 11:03	
WG297559-05	STD	01	03/18/2009 12:08	
WG297559-06	STD	01	03/18/2009 12:40	
WG297559-07	STD	01	03/18/2009 13:13	
WG297559-08	STD-CCV	01	03/18/2009 13:45	
WG297559-09	STD	01	03/18/2009 14:17	
WG297559-10	STD	01	03/18/2009 14:50	
WG297559-11	STD	01	03/18/2009 15:23	
WG297559-12	SSCV	01	03/18/2009 16:58	

* Sample past 12 hour tune limit

BFB

Login Number: L09030649
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297549

Tune ID: WG297549-01
Run Date: 03/19/2009
Run Time: 15:01
File ID: 10M71198

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	23.1	1728	PASS
75.0	95.0	30.0	60.0	50.1	3742	PASS
95.0	95.0	100	100	100	7467	PASS
96.0	95.0	5.00	9.00	6.19	462	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	91.9	6861	PASS
175	174	5.00	9.00	8.09	555	PASS
176	174	95.0	101	96.5	6621	PASS
177	176	5.00	9.00	7.34	486	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-12	SSCV	02	03/19/2009 17:05	

* Sample past 12 hour tune limit

BFB

Login Number: L09030649

Instrument: HPMS10

Analyst: TMB

Workgroup: WG298504

Tune ID: WG298504-01

Run Date: 03/30/2009

Run Time: 10:41

File ID: 10M71427

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.5	5334	PASS
75.0	95.0	30.0	60.0	46.7	10189	PASS
95.0	95.0	100	100	100	21808	PASS
96.0	95.0	5.00	9.00	6.87	1499	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	87.1	19004	PASS
175	174	5.00	9.00	8.53	1621	PASS
176	174	95.0	101	98.5	18723	PASS
177	176	5.00	9.00	7.28	1363	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298504-02	CCV	01	03/30/2009 11:45	
WG298505-01	BLANK	01	03/30/2009 12:50	
WG298505-02	LCS	01	03/30/2009 13:22	
WG298505-03	LCS2	01	03/30/2009 13:55	
L09030649-01	16WW21-032409	01	03/30/2009 15:00	
L09030649-02	16WW21-032409-FD	01	03/30/2009 15:32	
L09030649-03	16WW41-032409	DL01	03/30/2009 16:04	
L09030649-08	16EW07-032709	DL01	03/30/2009 18:47	
L09030649-11	16EW04-032609	DL01	03/30/2009 19:20	
L09030649-12	16EW03-032609	DL01	03/30/2009 19:52	
L09030649-13	16EW02-032609	DL01	03/30/2009 20:25	

* Sample past 12 hour tune limit

BFB

Login Number: L09030649
Instrument: HPMS10
Analyst: TMB
Workgroup: WG298624

Tune ID: WG298624-01
Run Date: 03/31/2009
Run Time: 10:44
File ID: 10M71459

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.5	6498	PASS
75.0	95.0	30.0	60.0	48.3	12789	PASS
95.0	95.0	100	100	100	26498	PASS
96.0	95.0	5.00	9.00	6.62	1755	PASS
173	174	0	2.00	0.726	176	PASS
174	95.0	50.0	100	91.5	24248	PASS
175	174	5.00	9.00	8.84	2143	PASS
176	174	95.0	101	97.6	23674	PASS
177	176	5.00	9.00	6.02	1426	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298624-02	CCV	01	03/31/2009 11:08	
WG298625-01	BLANK	01	03/31/2009 12:13	
WG298625-02	LCS	01	03/31/2009 12:46	
WG298625-03	LCS2	01	03/31/2009 13:18	
L09030649-11	16EW04-032609	DL02	03/31/2009 13:50	
L09030649-10	16EW05-032709	DL01	03/31/2009 14:23	
L09030649-14	16EW01-032609	DL01	03/31/2009 14:55	
L09030649-12	16EW03-032609	DL02	03/31/2009 15:27	
L09030649-13	16EW02-032609	DL02	03/31/2009 16:00	

* Sample past 12 hour tune limit

BFB

Login Number: L09030649
Instrument: HPMS11
Analyst: WTD
Workgroup: WG298037

Tune ID: WG298037-01
Run Date: 03/24/2009
Run Time: 09:50
File ID: 11M58013

Cal ID: HPMS11-24-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	26.2	2235	PASS
75.0	95.0	30.0	60.0	47.3	4031	PASS
95.0	95.0	100	100	100	8519	PASS
96.0	95.0	5.00	9.00	6.35	541	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	84.4	7189	PASS
175	174	5.00	9.00	6.77	487	PASS
176	174	95.0	101	100	7203	PASS
177	176	5.00	9.00	7.52	542	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298037-02	STD	01	03/24/2009 11:00	
WG298037-03	STD	01	03/24/2009 12:04	
WG298037-04	STD	01	03/24/2009 12:35	
WG298037-05	STD	01	03/24/2009 13:06	
WG298037-06	STD	01	03/24/2009 13:37	
WG298037-07	STD	01	03/24/2009 14:09	
WG298037-08	STD-CCV	01	03/24/2009 14:40	
WG298037-09	STD	01	03/24/2009 15:11	
WG298037-10	STD	01	03/24/2009 15:42	
WG298037-11	STD	01	03/24/2009 16:13	
WG298037-12	SSCV	01	03/24/2009 18:17	
WG298037-12	SSCV	02	03/24/2009 18:48	

* Sample past 12 hour tune limit

BFB

Login Number: L09030649
Instrument: HPMS11
Analyst: WTD
Workgroup: WG298609

Tune ID: WG298609-01
Run Date: 03/31/2009
Run Time: 08:52
File ID: 11M58202

Cal ID: HPMS11-24-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	29.0	5301	PASS
75.0	95.0	30.0	60.0	55.9	10225	PASS
95.0	95.0	100	100	100	18288	PASS
96.0	95.0	5.00	9.00	7.11	1300	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	73.4	13417	PASS
175	174	5.00	9.00	7.71	1035	PASS
176	174	95.0	101	95.2	12771	PASS
177	176	5.00	9.00	7.09	906	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298609-02	CCV	01	03/31/2009 09:16	
WG298610-01	BLANK	01	03/31/2009 10:18	
WG298610-02	LCS	01	03/31/2009 10:50	
WG298610-04	MS	01	03/31/2009 11:23	
WG298610-05	MSD	01	03/31/2009 11:54	
WG298610-03	REF	01	03/31/2009 12:26	
L09030649-03	16WW41-032409	DL02	03/31/2009 12:57	
L09030649-04	16WW42-032409	01	03/31/2009 13:28	
L09030649-05	16WW31-032409	01	03/31/2009 13:59	
L09030649-06	16WW40-032409	DL01	03/31/2009 14:30	
L09030649-07	16EW08-032709	DL01	03/31/2009 15:01	
L09030649-09	16EW06-032709	DL01	03/31/2009 15:32	

* Sample past 12 hour tune limit

BFB

Login Number: L09030649
Instrument: HPMS11
Analyst: WTD
Workgroup: WG298841

Tune ID: WG298841-01
Run Date: 04/02/2009
Run Time: 08:46
File ID: 11M58254

Cal ID: HPMS11-24-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	23.0	5818	PASS
75.0	95.0	30.0	60.0	49.4	12472	PASS
95.0	95.0	100	100	100	25265	PASS
96.0	95.0	5.00	9.00	6.50	1643	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	78.2	19766	PASS
175	174	5.00	9.00	6.90	1364	PASS
176	174	95.0	101	98.7	19502	PASS
177	176	5.00	9.00	6.29	1226	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298841-02	CCV	01	04/02/2009 09:09	
WG298842-01	BLANK	01	04/02/2009 10:12	
WG298842-02	LCS	01	04/02/2009 10:43	
WG298842-03	LCS2	01	04/02/2009 11:14	
L09030649-14	16EW01-032609	DL03	04/02/2009 12:48	

* Sample past 12 hour tune limit

BFB

Login Number: L09030649
Instrument: HPMS11
Analyst: WTD
Workgroup: WG299155

Tune ID: WG299155-01
Run Date: 04/07/2009
Run Time: 10:24
File ID: 11M58369

Cal ID: HPMS11-24-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	27.7	6174	PASS
75.0	95.0	30.0	60.0	54.6	12149	PASS
95.0	95.0	100	100	100	22270	PASS
96.0	95.0	5.00	9.00	7.65	1703	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	66.0	14705	PASS
175	174	5.00	9.00	7.64	1124	PASS
176	174	95.0	101	96.8	14229	PASS
177	176	5.00	9.00	7.69	1094	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG299155-02	CCV	01	04/07/2009 11:20	
WG299157-01	BLANK	01	04/07/2009 12:23	
WG299157-02	LCS	01	04/07/2009 12:54	
WG299157-04	MS	01	04/07/2009 13:24	
WG299157-05	MSD	01	04/07/2009 13:55	
WG299157-03	REF	01	04/07/2009 14:57	
L09030649-07	16EW08-032709	DL02	04/07/2009 21:11	

* Sample past 12 hour tune limit

Login Number: L09030649
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.1883	3.35		
1,2-Dichloropropane	CCC	0.2703	4.94		
Chloroform	CCC	0.3958	7.78		
Ethylbenzene	CCC	0.3605	14.1		
Toluene	CCC	1.132	7.54		
Vinyl Chloride	CCC	0.2730	19.8		0.99900
1,1,2,2-Tetrachloroethane	SPCC	0.7145	16.4		0.99900
1,1-Dichloroethane	SPCC	0.4721	6.28		
Bromoform	SPCC	0.1797	11.2		
Chlorobenzene	SPCC	0.7377	4.82		
Chloromethane	SPCC	0.4126	5.93		
1,1,1,2-Tetrachloroethane		0.3618	13.8		
1,1,1-Trichloroethane		0.3354	4.49		
1,1,2-Trichloroethane		0.2312	14.7		
1,1-Dichloropropene		0.2958	5.90		
1,2,3-Trichlorobenzene		0.8396	16.0		1.00000
1,2,3-Trichloropropane		0.1970	19.8		0.99900
1,2,4-Trichlorobenzene		0.7553	14.7		
1,2,4-Trimethylbenzene		2.395	14.2		
1,2-Dibromo-3-Chloropropane		0.1166	16.2		0.99900
1,2-Dibromoethane		0.2259	13.6		
1,2-Dichlorobenzene		1.338	15.6	1.00000	
1,2-Dichloroethane		0.3045	5.19		
1,3,5-Trimethylbenzene		3.088	11.5		
1,3-Dichlorobenzene		1.174	8.64		
1,3-Dichloropropane		0.4061	14.2		
1,4-Dichlorobenzene		1.215	12.5		
2,2-Dichloropropane		0.3380	5.98		
2-Butanone		0.08153	5.47		
2-Chloroethyl Vinyl Ether		0.09620	26.8		1.00000
2-Chlorotoluene		2.102	12.3		
2-Hexanone		0.1322	7.49		
4-Chlorotoluene		1.554	10.8		
4-Methyl-2-Pentanone		0.06200	4.77		
Acetone		0.05288	11.2		
Benzene		0.8900	11.7		
Bromobenzene		0.7691	11.7		
Bromochloromethane		0.1104	5.81		
Bromodichloromethane		0.2693	3.29		
Bromomethane		0.1716	10.7		
Carbon Disulfide		0.6995	7.14		
Carbon Tetrachloride		0.2761	4.74		
Chloroethane		0.1223	7.92		
Dibromochloromethane		0.3035	14.0		
Dibromomethane		0.1134	4.65		

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Login Number: L09030649
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Dichlorodifluoromethane		0.2296	7.70		
Hexachlorobutadiene		0.4610	12.7		
Isopropylbenzene		1.233	6.54		
Methylene Chloride		0.3418	57.3	0.99900	
Naphthalene		1.213	13.6		
Styrene		0.5724	23.1		1.00000
Tetrachloroethene		0.2654	6.64		
Trichloroethene		0.2329	3.80		
Trichlorofluoromethane		0.3511	7.69		
Vinyl Acetate		0.4106	39.0		0.99800
cis-1,2-Dichloroethene		0.2353	3.88		
cis-1,3-Dichloropropene		0.2982	3.63		
m-,p-Xylene		0.4183	12.6		
n-Butylbenzene		1.578	12.3		
n-Propylbenzene		2.444	14.3		
o-Xylene		0.4523	8.26		
p-Isopropyltoluene		2.388	15.5		1.00000
sec-Butylbenzene		2.894	12.5		
tert-Butylbenzene		0.6459	13.8		
trans-1,2-Dichloroethene		0.2154	3.55		
trans-1,3-Dichloropropene		0.4012	15.0		

R = Correlation coefficient; 0.995 minimum
R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

Login Number: L09030649
Analytical Method: 8260B
ICAL Workgroup: WG298037

Instrument ID: HPMS11
Initial Calibration Date: 24-MAR-09 16:13
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.3797	8.19		
1,2-Dichloropropane	CCC	0.2426	5.25		
Chloroform	CCC	0.4141	3.57		
Ethylbenzene	CCC	0.4475	8.70		
Toluene	CCC	1.177	2.83		
Vinyl Chloride	CCC	0.2385	14.9		
1,1,2,2-Tetrachloroethane	SPCC	0.4063	19.4		0.99900
1,1-Dichloroethane	SPCC	0.4407	6.59		
Bromoform	SPCC	0.2022	8.79		
Chlorobenzene	SPCC	0.8489	3.69		
Chloromethane	SPCC	0.3970	3.87		
1,1,1,2-Tetrachloroethane		0.3148	12.2		
1,1,1-Trichloroethane		0.3670	7.29		
1,1,2-Trichloroethane		0.2100	7.39		
1,1-Dichloropropene		0.3043	4.05		
1,2,3-Trichlorobenzene		0.6786	12.5		
1,2,3-Trichloropropane		0.1303	12.7		
1,2,4-Trichlorobenzene		0.7417	12.6		
1,2,4-Trimethylbenzene		1.831	5.38		
1,2-Dibromo-3-Chloropropane		0.07718	5.46		
1,2-Dibromoethane		0.2175	7.78		
1,2-Dichlorobenzene		1.062	8.10		
1,2-Dichloroethane		0.3382	1.68		
1,3,5-Trimethylbenzene		1.762	4.29		
1,3-Dichlorobenzene		1.114	8.16		
1,3-Dichloropropane		0.3838	5.01		
1,4-Dichlorobenzene		1.182	6.72		
2,2-Dichloropropane		0.3243	8.99		
2-Butanone		0.09736	4.78		
2-Chloroethyl Vinyl Ether		0.08037	11.0		
2-Chlorotoluene		1.686	5.40		
2-Hexanone		0.1905	4.26		
4-Chlorotoluene		1.457	5.01		
4-Methyl-2-Pentanone		0.06380	8.80		
Acetone		0.07056	12.5		
Benzene		0.8526	4.65		
Bromobenzene		0.5923	7.54		
Bromochloromethane		0.1348	12.7		
Bromodichloromethane		0.3042	6.04		
Bromomethane		0.1191	8.09		
Carbon Disulfide		0.7235	4.62		
Carbon Tetrachloride		0.3413	4.78		
Chloroethane		0.1624	7.32		
Dibromochloromethane		0.2841	11.1		
Dibromomethane		0.1198	3.67		

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Login Number: L09030649
Analytical Method: 8260B
ICAL Workgroup: WG298037

Instrument ID: HPMS11
Initial Calibration Date: 24-MAR-09 16:13
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Dichlorodifluoromethane		0.2856	4.37		
Hexachlorobutadiene		0.3480	8.32		
Isopropylbenzene		1.299	5.58		
Methylene Chloride		0.2725	30.4		0.99900
Naphthalene		1.458	14.3		
Styrene		0.8277	14.2		
Tetrachloroethene		0.2517	7.81		
Trichloroethene		0.2423	5.66		
Trichlorofluoromethane		0.3678	7.89		
Vinyl Acetate		0.3205	14.6		
cis-1,2-Dichloroethene		0.2318	4.01		
cis-1,3-Dichloropropene		0.3364	10.6		
m-,p-Xylene		0.5409	9.64		
n-Butylbenzene		1.690	9.67		
n-Propylbenzene		2.479	5.85		
o-Xylene		0.5170	8.84		
p-Isopropyltoluene		2.013	6.65		
sec-Butylbenzene		2.157	6.11		
tert-Butylbenzene		0.3952	11.6		
trans-1,2-Dichloroethene		0.2140	8.42		
trans-1,3-Dichloropropene		0.4192	9.36		

R = Correlation coefficient; 0.995 minimum
R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

Login Number: L09030649
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	2202.00000	0.1895	1.00	5391.00000	0.1825
1,2-Dichloropropane	NA	NA	NA	0.400	3447.00000	0.2967	1.00	7961.00000	0.2695
Chloroform	0.300	3765.00000	0.4221	0.400	5303.00000	0.4565	1.00	11678.0000	0.3954
Ethylbenzene	NA	NA	NA	0.400	2216.00000	0.3389	1.00	4956.00000	0.3082
Toluene	NA	NA	NA	0.400	8101.00000	1.239	1.00	17704.0000	1.101
Vinyl Chloride	NA	NA	NA	0.400	4209.00000	0.3623	1.00	8395.00000	0.2842
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	1867.00000	0.7911	1.00	4382.00000	0.7360
1,1-Dichloroethane	NA	NA	NA	0.400	5980.00000	0.5148	1.00	14353.0000	0.4859
Bromoform	NA	NA	NA	NA	NA	NA	1.00	2932.00000	0.1823
Chlorobenzene	NA	NA	NA	0.400	5231.00000	0.8000	1.00	11318.0000	0.7038
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	11928.0000	0.4038
1,1,1,2-Tetrachloroethane	NA	NA	NA	0.400	2590.00000	0.3961	1.00	6498.00000	0.4040
1,1,1-Trichloroethane	NA	NA	NA	0.400	4101.00000	0.3530	1.00	9575.00000	0.3242
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	1.00	3938.00000	0.2449
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7941.00000	0.2688
1,2,3-Trichlorobenzene	0.300	1998.00000	1.075	0.400	1820.00000	0.7712	1.00	4215.00000	0.7079
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	1.00	988.000000	0.1659
1,2,4-Trichlorobenzene	NA	NA	NA	0.400	1882.00000	0.7975	1.00	3520.00000	0.5912
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA	1.00	15067.0000	2.531
1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA	0.400	1481.00000	0.2265	1.00	4160.00000	0.2587
1,2-Dichlorobenzene	0.300	3433.00000	1.847	0.400	3104.00000	1.315	1.00	7574.00000	1.272
1,2-Dichloroethane	NA	NA	NA	0.400	3716.00000	0.3199	1.00	9055.00000	0.3066
1,3,5-Trimethylbenzene	NA	NA	NA	0.400	7819.00000	3.313	1.00	17996.0000	3.023
1,3-Dichlorobenzene	NA	NA	NA	0.400	2706.00000	1.147	1.00	6086.00000	1.022
1,3-Dichloropropane	NA	NA	NA	0.400	2928.00000	0.4478	1.00	7472.00000	0.4646
1,4-Dichlorobenzene	0.300	2921.00000	1.571	0.400	3078.00000	1.304	1.00	6987.00000	1.174
2,2-Dichloropropane	NA	NA	NA	0.400	4197.00000	0.3613	1.00	10617.0000	0.3594
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NA	NA	NA	0.400	5777.00000	2.448	1.00	12608.0000	2.118
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NA	NA	NA	0.400	3939.00000	1.669	1.00	7649.00000	1.285
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	13114.0000	1.129	1.00	26569.0000	0.8995
Bromobenzene	0.300	1718.00000	0.9242	0.400	1696.00000	0.7187	1.00	4142.00000	0.6957
Bromochloromethane	NA	NA	NA	0.400	1257.00000	0.1082	1.00	3455.00000	0.1170
Bromodichloromethane	NA	NA	NA	0.400	3178.00000	0.2736	1.00	7931.00000	0.2685
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	5192.00000	0.1758
Carbon Disulfide	NA	NA	NA	NA	NA	NA	1.00	21416.0000	0.7250
Carbon Tetrachloride	NA	NA	NA	0.400	3008.00000	0.2589	1.00	7989.00000	0.2705

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Login Number: L09030649
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	11388.0000	0.1885	5.00	30423.0000	0.1915	20.0	129120.000	0.1924
1,2-Dichloropropane	2.00	16354.0000	0.2707	5.00	44161.0000	0.2779	20.0	179925.000	0.2681
Chloroform	2.00	23569.0000	0.3901	5.00	63989.0000	0.4027	20.0	260617.000	0.3883
Ethylbenzene	2.00	9877.00000	0.2994	5.00	29075.0000	0.3171	20.0	181566.000	0.3766
Toluene	2.00	37280.0000	1.130	5.00	110456.000	1.205	20.0	568852.000	1.180
Vinyl Chloride	2.00	19052.0000	0.3153	5.00	46331.0000	0.2916	20.0	176450.000	0.2629
1,1,2,2-Tetrachloroethane	2.00	9114.00000	0.7433	5.00	26446.0000	0.8314	20.0	120640.000	0.7847
1,1-Dichloroethane	2.00	28294.0000	0.4683	5.00	78309.0000	0.4928	20.0	317741.000	0.4734
Bromoform	2.00	6657.00000	0.2018	5.00	18768.0000	0.2047	20.0	88251.0000	0.1831
Chlorobenzene	2.00	23414.0000	0.7098	5.00	66062.0000	0.7205	20.0	364419.000	0.7560
Chloromethane	2.00	28151.0000	0.4659	5.00	66075.0000	0.4158	20.0	264636.000	0.3943
1,1,1,2-Tetrachloroethane	2.00	13020.0000	0.3947	5.00	37528.0000	0.4093	20.0	158277.000	0.3283
1,1,1-Trichloroethane	2.00	20813.0000	0.3445	5.00	54388.0000	0.3423	20.0	226334.000	0.3372
1,1,2-Trichloroethane	2.00	8629.00000	0.2616	5.00	25114.0000	0.2739	20.0	104733.000	0.2173
1,1-Dichloropropene	2.00	17581.0000	0.2910	5.00	50118.0000	0.3154	20.0	206930.000	0.3083
1,2,3-Trichlorobenzene	2.00	8972.00000	0.7317	5.00	29413.0000	0.9247	20.0	150336.000	0.9778
1,2,3-Trichloropropane	2.00	2296.00000	0.1872	5.00	8209.00000	0.2581	20.0	34955.0000	0.2274
1,2,4-Trichlorobenzene	2.00	7582.00000	0.6183	5.00	24334.0000	0.7650	20.0	139374.000	0.9065
1,2,4-Trimethylbenzene	2.00	30951.0000	2.524	5.00	83508.0000	2.625	20.0	407638.000	2.651
1,2-Dibromo-3-Chloropropane	2.00	1387.00000	0.1131	5.00	4194.00000	0.1319	20.0	21152.0000	0.1376
1,2-Dibromoethane	2.00	7978.00000	0.2419	5.00	23909.0000	0.2607	20.0	105090.000	0.2180
1,2-Dichlorobenzene	2.00	14783.0000	1.206	5.00	39283.0000	1.235	20.0	196122.000	1.276
1,2-Dichloroethane	2.00	18595.0000	0.3077	5.00	50508.0000	0.3178	20.0	209078.000	0.3115
1,3,5-Trimethylbenzene	2.00	38274.0000	3.121	5.00	110038.000	3.459	20.0	523415.000	3.405
1,3-Dichlorobenzene	2.00	13095.0000	1.068	5.00	37192.0000	1.169	20.0	189568.000	1.233
1,3-Dichloropropane	2.00	14347.0000	0.4350	5.00	41484.0000	0.4524	20.0	182014.000	0.3776
1,4-Dichlorobenzene	2.00	12921.0000	1.054	5.00	37757.0000	1.187	20.0	183358.000	1.193
2,2-Dichloropropane	2.00	20892.0000	0.3458	5.00	54768.0000	0.3447	20.0	223111.000	0.3324
2-Butanone	NA	NA	NA	5.00	14139.0000	0.08900	20.0	55998.0000	0.08340
2-Chloroethyl Vinyl Ether	2.00	3445.00000	0.05700	5.00	11195.0000	0.07040	20.0	70968.0000	0.1057
2-Chlorotoluene	2.00	23650.0000	1.929	5.00	62080.0000	1.952	20.0	350791.000	2.282
2-Hexanone	NA	NA	NA	5.00	10691.0000	0.1166	20.0	62637.0000	0.1299
4-Chlorotoluene	2.00	16803.0000	1.370	5.00	48621.0000	1.529	20.0	238323.000	1.550
4-Methyl-2-Pentanone	NA	NA	NA	5.00	9058.00000	0.05700	20.0	43461.0000	0.06480
Acetone	NA	NA	NA	5.00	10133.0000	0.06380	20.0	35127.0000	0.05230
Benzene	2.00	51554.0000	0.8532	5.00	139846.000	0.8800	20.0	586477.000	0.8738
Bromobenzene	2.00	8732.00000	0.7121	5.00	24080.0000	0.7570	20.0	130066.000	0.8460
Bromochloromethane	2.00	6796.00000	0.1125	5.00	18750.0000	0.1180	20.0	74231.0000	0.1106
Bromodichloromethane	2.00	15558.0000	0.2575	5.00	45047.0000	0.2835	20.0	183553.000	0.2735
Bromomethane	2.00	12059.0000	0.1996	5.00	30234.0000	0.1903	20.0	105356.000	0.1570
Carbon Disulfide	2.00	43608.0000	0.7217	5.00	116649.000	0.7341	20.0	485162.000	0.7229
Carbon Tetrachloride	2.00	16790.0000	0.2779	5.00	46444.0000	0.2923	20.0	190198.000	0.2834

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Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	329580.000	0.1865	100	762552.000	0.1982	200	1363656.00	0.1776
1,2-Dichloropropane	50.0	459398.000	0.2600	100	1033249.00	0.2686	200	1926295.00	0.2509
Chloroform	50.0	657133.000	0.3718	100	1495126.00	0.3887	200	2658987.00	0.3463
Ethylbenzene	50.0	553747.000	0.4040	100	1250773.00	0.4287	200	2576983.00	0.4108
Toluene	50.0	1498157.00	1.093	100	3342944.00	1.146	200	6028123.00	0.9609
Vinyl Chloride	50.0	427744.000	0.2420	100	942149.000	0.2449	200	1396742.00	0.1819
1,1,2,2-Tetrachloroethane	50.0	306843.000	0.6188	100	612994.000	0.4964	NA	NA	NA
1,1-Dichloroethane	50.0	803255.000	0.4545	100	1819010.00	0.4729	200	3177501.00	0.4138
Bromoform	50.0	235033.000	0.1715	100	491069.000	0.1683	200	918842.000	0.1465
Chlorobenzene	50.0	1018617.00	0.7431	100	2241462.00	0.7682	200	4390321.00	0.6998
Chloromethane	50.0	706350.000	0.3997	100	1569584.00	0.4080	200	3078222.00	0.4009
1,1,1,2-Tetrachloroethane	50.0	408434.000	0.2980	100	882662.000	0.3025	NA	NA	NA
1,1,1-Trichloroethane	50.0	579114.000	0.3277	100	1335703.00	0.3472	200	2355450.00	0.3068
1,1,2-Trichloroethane	50.0	271102.000	0.1978	100	559618.000	0.1918	NA	NA	NA
1,1-Dichloropropene	50.0	519605.000	0.2940	100	1203619.00	0.3129	200	2151741.00	0.2802
1,2,3-Trichlorobenzene	50.0	439450.000	0.8862	100	993490.000	0.8045	200	2018460.00	0.6776
1,2,3-Trichloropropane	50.0	93774.0000	0.1891	100	190746.000	0.1545	NA	NA	NA
1,2,4-Trichlorobenzene	50.0	427613.000	0.8624	100	987228.000	0.7994	200	2091393.00	0.7021
1,2,4-Trimethylbenzene	50.0	1241658.00	2.504	100	2775026.00	2.247	200	5012151.00	1.683
1,2-Dibromo-3-Chloropropane	50.0	61928.0000	0.1249	100	130743.000	0.1059	200	256844.000	0.08620
1,2-Dibromoethane	50.0	268362.000	0.1958	100	523939.000	0.1796	NA	NA	NA
1,2-Dichlorobenzene	50.0	643024.000	1.297	100	1555334.00	1.260	NA	NA	NA
1,2-Dichloroethane	50.0	528028.000	0.2988	100	1169626.00	0.3041	200	2067950.00	0.2693
1,3,5-Trimethylbenzene	50.0	1409824.00	2.843	100	3031588.00	2.455	NA	NA	NA
1,3-Dichlorobenzene	50.0	642449.000	1.296	100	1616456.00	1.309	200	3429508.00	1.151
1,3-Dichloropropane	50.0	467355.000	0.3409	100	947207.000	0.3246	NA	NA	NA
1,4-Dichlorobenzene	50.0	577078.000	1.164	100	1479404.00	1.198	200	3242118.00	1.088
2,2-Dichloropropane	50.0	568501.000	0.3217	100	1302298.00	0.3386	200	2302408.00	0.2999
2-Butanone	50.0	143467.000	0.08120	100	304541.000	0.07920	200	581268.000	0.07570
2-Chloroethyl Vinyl Ether	50.0	198911.000	0.1126	100	440872.000	0.1146	200	897798.000	0.1169
2-Chlorotoluene	50.0	1162356.00	2.344	100	2586259.00	2.094	200	4871025.00	1.635
2-Hexanone	50.0	199383.000	0.1455	100	408127.000	0.1399	200	823313.000	0.1312
4-Chlorotoluene	50.0	857122.000	1.729	100	2180549.00	1.766	200	4564424.00	1.532
4-Methyl-2-Pentanone	50.0	115312.000	0.06520	100	238672.000	0.06200	200	474624.000	0.06180
Acetone	50.0	92985.0000	0.05260	100	205962.000	0.05350	200	364614.000	0.04750
Benzene	50.0	1505910.00	0.8521	100	3337022.00	0.8675	200	5872630.00	0.7648
Bromobenzene	50.0	427493.000	0.8621	100	937993.000	0.7596	200	1926786.00	0.6468
Bromochloromethane	50.0	189265.000	0.1071	100	430334.000	0.1119	200	749143.000	0.09760
Bromodichloromethane	50.0	469646.000	0.2658	100	1055327.00	0.2744	200	1978771.00	0.2577
Bromomethane	50.0	261442.000	0.1479	100	649442.000	0.1688	200	1240282.00	0.1615
Carbon Disulfide	50.0	1240883.00	0.7022	100	2696693.00	0.7011	200	4527199.00	0.5896
Carbon Tetrachloride	50.0	485424.000	0.2747	100	1123796.00	0.2922	200	1988639.00	0.2590

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Column ID: F

Analyte	WG297559-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1,2-Tetrachloroethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,1-Dichloropropene	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA
1,2,4-Trimethylbenzene	NA	NA	NA
1,2-Dibromo-3-Chloropropane	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
1,3,5-Trimethylbenzene	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA
1,3-Dichloropropane	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA
2,2-Dichloropropane	NA	NA	NA
2-Butanone	300	891790.000	0.08070
2-Chloroethyl Vinyl Ether	NA	NA	NA
2-Chlorotoluene	NA	NA	NA
2-Hexanone	300	850457.000	0.1298
4-Chlorotoluene	NA	NA	NA
4-Methyl-2-Pentanone	300	676286.000	0.06120
Acetone	300	525628.000	0.04760
Benzene	NA	NA	NA
Bromobenzene	NA	NA	NA
Bromochloromethane	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA

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Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	NA	NA	NA	NA	NA	NA	1.00	3089.00000	0.1046
Dibromochloromethane	NA	NA	NA	0.400	2254.00000	0.3447	1.00	4925.00000	0.3062
Dibromomethane	NA	NA	NA	0.400	1212.00000	0.1043	1.00	3489.00000	0.1181
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	1.00	5897.00000	0.1996
Hexachlorobutadiene	NA	NA	NA	0.400	958.000000	0.4059	1.00	2562.00000	0.4303
Isopropylbenzene	NA	NA	NA	0.400	8778.00000	1.343	1.00	20436.0000	1.271
Methylene Chloride	NA	NA	NA	0.400	8581.00000	0.7387	1.00	13415.0000	0.4542
Naphthalene	NA	NA	NA	0.400	3205.00000	1.358	1.00	6377.00000	1.071
Styrene	NA	NA	NA	NA	NA	NA	1.00	7775.00000	0.4835
Tetrachloroethene	NA	NA	NA	0.400	1770.00000	0.2707	1.00	4245.00000	0.2640
Trichloroethene	NA	NA	NA	0.400	2639.00000	0.2272	1.00	6613.00000	0.2239
Trichlorofluoromethane	NA	NA	NA	0.400	4216.00000	0.3629	1.00	9058.00000	0.3067
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2851.00000	0.2454	1.00	7192.00000	0.2435
cis-1,3-Dichloropropene	NA	NA	NA	0.400	3509.00000	0.3021	1.00	8302.00000	0.2811
m-,p-Xylene	NA	NA	NA	0.800	5632.00000	0.4307	2.00	11900.0000	0.3700
n-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	9829.00000	1.651
n-Propylbenzene	NA	NA	NA	0.400	6215.00000	2.634	1.00	13508.0000	2.269
o-Xylene	NA	NA	NA	NA	NA	NA	1.00	6816.00000	0.4238
p-Isopropyltoluene	NA	NA	NA	NA	NA	NA	1.00	15139.0000	2.543
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	17410.0000	2.924
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	4285.00000	0.7197
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2506.00000	0.2157	1.00	6693.00000	0.2266
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7174.00000	0.4461

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Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	2.00	7583.00000	0.1255	5.00	20796.0000	0.1309	20.0	83526.0000	0.1244
Dibromochloromethane	2.00	11508.0000	0.3489	5.00	30891.0000	0.3369	20.0	137608.000	0.2855
Dibromomethane	2.00	6927.00000	0.1146	5.00	18763.0000	0.1181	20.0	78492.0000	0.1169
Dichlorodifluoromethane	2.00	14976.0000	0.2479	5.00	38579.0000	0.2428	20.0	159365.000	0.2374
Hexachlorobutadiene	2.00	5571.00000	0.4543	5.00	16981.0000	0.5339	20.0	84203.0000	0.5477
Isopropylbenzene	2.00	39930.0000	1.211	5.00	115346.000	1.258	20.0	562076.000	1.166
Methylene Chloride	2.00	18642.0000	0.3085	5.00	42380.0000	0.2667	20.0	146396.000	0.2181
Naphthalene	2.00	12224.0000	0.9969	5.00	37197.0000	1.169	20.0	217737.000	1.416
Styrene	2.00	15261.0000	0.4627	5.00	43957.0000	0.4794	20.0	259223.000	0.5377
Tetrachloroethene	2.00	9504.00000	0.2881	5.00	25728.0000	0.2806	20.0	130480.000	0.2707
Trichloroethene	2.00	13526.0000	0.2239	5.00	37297.0000	0.2347	20.0	161970.000	0.2413
Trichlorofluoromethane	2.00	23131.0000	0.3828	5.00	59300.0000	0.3732	20.0	242919.000	0.3619
Vinyl Acetate	2.00	35900.0000	0.5941	5.00	95835.0000	0.6031	20.0	294336.000	0.4385
cis-1,2-Dichloroethene	2.00	13973.0000	0.2313	5.00	36900.0000	0.2322	20.0	158622.000	0.2363
cis-1,3-Dichloropropene	2.00	17270.0000	0.2858	5.00	49310.0000	0.3103	20.0	209487.000	0.3121
m-,p-Xylene	4.00	24837.0000	0.3765	10.0	65350.0000	0.3564	40.0	376375.000	0.3904
n-Butylbenzene	2.00	22062.0000	1.799	5.00	54389.0000	1.710	20.0	238553.000	1.552
n-Propylbenzene	2.00	25259.0000	2.060	5.00	65575.0000	2.062	20.0	349035.000	2.270
o-Xylene	2.00	14065.0000	0.4264	5.00	37506.0000	0.4090	20.0	210116.000	0.4359
p-Isopropyltoluene	2.00	32886.0000	2.682	5.00	87167.0000	2.740	20.0	400050.000	2.602
sec-Butylbenzene	2.00	37920.0000	3.092	5.00	104048.000	3.271	20.0	504218.000	3.280
tert-Butylbenzene	2.00	7952.00000	0.6485	5.00	24347.0000	0.7654	20.0	99562.0000	0.6476
trans-1,2-Dichloroethene	2.00	12925.0000	0.2139	5.00	33512.0000	0.2109	20.0	145299.000	0.2165
trans-1,3-Dichloropropene	2.00	15479.0000	0.4693	5.00	40467.0000	0.4413	20.0	185868.000	0.3856

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Column ID: F

Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	50.0	206513.000	0.1169	100	514022.000	0.1336	200	925113.000	0.1205
Dibromochloromethane	50.0	353308.000	0.2577	100	713925.000	0.2447	NA	NA	NA
Dibromomethane	50.0	199907.000	0.1131	100	445320.000	0.1158	200	817443.000	0.1065
Dichlorodifluoromethane	50.0	399973.000	0.2263	100	923781.000	0.2402	200	1633246.00	0.2127
Hexachlorobutadiene	50.0	240534.000	0.4851	100	556239.000	0.4504	200	1132043.00	0.3800
Isopropylbenzene	50.0	1754773.00	1.280	100	3656932.00	1.253	200	6767653.00	1.079
Methylene Chloride	50.0	353244.000	0.1999	100	795663.000	0.2068	NA	NA	NA
Naphthalene	50.0	675620.000	1.363	100	1378729.00	1.117	NA	NA	NA
Styrene	50.0	945498.000	0.6898	100	2279199.00	0.7812	NA	NA	NA
Tetrachloroethene	50.0	334935.000	0.2443	100	785824.000	0.2693	200	1475682.00	0.2352
Trichloroethene	50.0	411484.000	0.2328	100	958795.000	0.2493	200	1764921.00	0.2299
Trichlorofluoromethane	50.0	622383.000	0.3522	100	1365200.00	0.3549	200	2412845.00	0.3142
Vinyl Acetate	50.0	540081.000	0.3056	100	1104768.00	0.2872	200	1806316.00	0.2353
cis-1,2-Dichloroethene	50.0	411821.000	0.2330	100	936428.000	0.2434	200	1670024.00	0.2175
cis-1,3-Dichloropropene	50.0	531287.000	0.3006	100	1149697.00	0.2989	200	2263320.00	0.2948
m-,p-Xylene	100	1283637.00	0.4682	200	2928843.00	0.5019	400	5671213.00	0.4520
n-Butylbenzene	50.0	748338.000	1.509	100	2012828.00	1.630	200	3562919.00	1.196
n-Propylbenzene	50.0	1424532.00	2.873	100	3666084.00	2.969	200	7190902.00	2.414
o-Xylene	50.0	672761.000	0.4908	100	1472355.00	0.5046	200	2982505.00	0.4754
p-Isopropyltoluene	50.0	1146412.00	2.312	100	2642799.00	2.140	200	5059144.00	1.698
sec-Butylbenzene	50.0	1359469.00	2.742	100	3303794.00	2.675	200	6769146.00	2.273
tert-Butylbenzene	50.0	278343.000	0.5613	100	657666.000	0.5326	NA	NA	NA
trans-1,2-Dichloroethene	50.0	381454.000	0.2158	100	855793.000	0.2225	200	1542763.00	0.2009
trans-1,3-Dichloropropene	50.0	465577.000	0.3396	100	948993.000	0.3253	NA	NA	NA

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Column ID: F

Analyte	WG297559-11		
	CONC	RESP	RF
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Dibromomethane	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA
Isopropylbenzene	NA	NA	NA
Methylene Chloride	NA	NA	NA
Naphthalene	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA
Vinyl Acetate	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-, p-Xylene	NA	NA	NA
n-Butylbenzene	NA	NA	NA
n-Propylbenzene	NA	NA	NA
o-Xylene	NA	NA	NA
p-Isopropyltoluene	NA	NA	NA
sec-Butylbenzene	NA	NA	NA
tert-Butylbenzene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

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Login Number: L09030649
Analytical Method: 8260BInstrument ID: HPMS11
Initial Calibration Date: 24-MAR-09 16:13
Column ID: F

Analyte	WG298037-02			WG298037-03			WG298037-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	0.300	2703.00000	0.2998	0.400	4254.00000	0.3856	1.00	10496.00000	0.3896
1,2-Dichloropropane	0.300	1965.00000	0.2179	0.400	2909.00000	0.2636	1.00	6582.00000	0.2443
Chloroform	0.300	3551.00000	0.3939	0.400	4830.00000	0.4378	1.00	11248.00000	0.4175
Ethylbenzene	0.300	2714.00000	0.4099	0.400	3577.00000	0.4372	1.00	8168.00000	0.4087
Toluene	0.300	7567.00000	1.143	0.400	10011.00000	1.224	1.00	23327.00000	1.167
Vinyl Chloride	NA	NA	NA	0.400	3016.00000	0.2733	1.00	6783.00000	0.2518
1,1,2,2-Tetrachloroethane	0.300	1112.00000	0.2883	0.400	1793.00000	0.3720	1.00	6958.00000	0.5888
1,1-Dichloroethane	0.300	3349.00000	0.3715	0.400	4903.00000	0.4444	1.00	11812.00000	0.4385
Bromoform	NA	NA	NA	NA	NA	NA	1.00	4533.00000	0.2268
Chlorobenzene	0.300	5487.00000	0.8288	0.400	7149.00000	0.8739	1.00	17052.00000	0.8532
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	11329.00000	0.4205
1,1,1,2-Tetrachloroethane	0.300	1725.00000	0.2605	0.400	2043.00000	0.2497	1.00	6714.00000	0.3359
1,1,1-Trichloroethane	0.300	2716.00000	0.3012	0.400	4188.00000	0.3796	1.00	9880.00000	0.3668
1,1,2-Trichloroethane	0.300	1140.00000	0.1722	0.400	1841.00000	0.2250	1.00	4465.00000	0.2234
1,1-Dichloropropene	0.300	2632.00000	0.2919	0.400	3426.00000	0.3105	1.00	8213.00000	0.3049
1,2,3-Trichlorobenzene	0.300	2452.00000	0.6357	0.400	2610.00000	0.5416	1.00	9936.00000	0.8408
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	1.00	1967.00000	0.1665
1,2,4-Trichlorobenzene	0.300	2273.00000	0.5893	0.400	3248.00000	0.6740	1.00	9620.00000	0.8141
1,2,4-Trimethylbenzene	0.300	6724.00000	1.743	0.400	8373.00000	1.737	1.00	22318.00000	1.889
1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	0.300	1155.00000	0.1745	0.400	1827.00000	0.2233	1.00	4556.00000	0.2280
1,2-Dichlorobenzene	0.300	3851.00000	0.9984	0.400	4985.00000	1.034	1.00	14644.00000	1.239
1,2-Dichloroethane	0.300	2937.00000	0.3258	0.400	3769.00000	0.3416	1.00	9255.00000	0.3436
1,3,5-Trimethylbenzene	0.300	6624.00000	1.717	0.400	8024.00000	1.665	1.00	20954.00000	1.773
1,3-Dichlorobenzene	0.300	3934.00000	1.020	0.400	5081.00000	1.054	1.00	14415.00000	1.220
1,3-Dichloropropane	0.300	2631.00000	0.3974	0.400	2780.00000	0.3398	1.00	8081.00000	0.4043
1,4-Dichlorobenzene	0.300	4405.00000	1.142	0.400	5545.00000	1.151	1.00	15452.00000	1.308
2,2-Dichloropropane	NA	NA	NA	0.400	2913.00000	0.2640	1.00	8271.00000	0.3070
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	0.300	5919.00000	1.535	0.400	8093.00000	1.679	1.00	21830.00000	1.847
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	0.300	5404.00000	1.401	0.400	7061.00000	1.465	1.00	18687.00000	1.581
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	0.300	7568.00000	0.8394	0.400	10376.00000	0.9404	1.00	23157.00000	0.8596
Bromobenzene	0.300	1998.00000	0.5180	0.400	2831.00000	0.5874	1.00	8023.00000	0.6789
Bromochloromethane	NA	NA	NA	0.400	1051.00000	0.09530	1.00	3994.00000	0.1483
Bromodichloromethane	0.300	2434.00000	0.2700	0.400	3181.00000	0.2883	1.00	7857.00000	0.2917
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	3324.00000	0.1234
Carbon Disulfide	NA	NA	NA	0.400	8212.00000	0.7443	1.00	18595.00000	0.6903
Carbon Tetrachloride	0.300	2833.00000	0.3142	0.400	3659.00000	0.3316	1.00	8851.00000	0.3286

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Column ID: F

Analyte	WG298037-05			WG298037-06			WG298037-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	21570.0000	0.3961	5.00	51488.0000	0.3721	20.0	226996.000	0.3864
1,2-Dichloropropane	2.00	12685.0000	0.2330	5.00	33353.0000	0.2411	20.0	141144.000	0.2403
Chloroform	2.00	21736.0000	0.3992	5.00	55453.0000	0.4008	20.0	242256.000	0.4124
Ethylbenzene	2.00	16794.0000	0.4185	5.00	44194.0000	0.4318	20.0	194797.000	0.4489
Toluene	2.00	44869.0000	1.118	5.00	118515.000	1.158	20.0	513241.000	1.183
Vinyl Chloride	2.00	14022.0000	0.2575	5.00	38249.0000	0.2764	20.0	143709.000	0.2446
1,1,2,2-Tetrachloroethane	2.00	9958.00000	0.4163	5.00	24982.0000	0.4063	20.0	111431.000	0.4160
1,1-Dichloroethane	2.00	23379.0000	0.4293	5.00	61103.0000	0.4416	20.0	264204.000	0.4497
Bromoform	2.00	7059.00000	0.1759	5.00	18778.0000	0.1835	20.0	87467.0000	0.2016
Chlorobenzene	2.00	33031.0000	0.8231	5.00	82344.0000	0.8046	20.0	362749.000	0.8360
Chloromethane	2.00	21970.0000	0.4035	5.00	54749.0000	0.3957	20.0	222718.000	0.3791
1,1,1,2-Tetrachloroethane	2.00	12532.0000	0.3123	5.00	31645.0000	0.3092	20.0	139860.000	0.3223
1,1,1-Trichloroethane	2.00	20352.0000	0.3738	5.00	49150.0000	0.3552	20.0	219434.000	0.3735
1,1,2-Trichloroethane	2.00	8234.00000	0.2052	5.00	21416.0000	0.2093	20.0	93848.0000	0.2163
1,1-Dichloropropene	2.00	15568.0000	0.2859	5.00	40102.0000	0.2898	20.0	180268.000	0.3069
1,2,3-Trichlorobenzene	2.00	15072.0000	0.6302	5.00	39382.0000	0.6405	20.0	182843.000	0.6826
1,2,3-Trichloropropane	2.00	3046.00000	0.1274	5.00	8018.00000	0.1304	20.0	34059.0000	0.1271
1,2,4-Trichlorobenzene	2.00	16117.0000	0.6738	5.00	43286.0000	0.7039	20.0	199370.000	0.7443
1,2,4-Trimethylbenzene	2.00	41131.0000	1.720	5.00	106953.000	1.739	20.0	491767.000	1.836
1,2-Dibromo-3-Chloropropane	2.00	1683.00000	0.07040	5.00	4552.00000	0.07400	20.0	21913.0000	0.08180
1,2-Dibromoethane	2.00	8930.00000	0.2225	5.00	21760.0000	0.2126	20.0	100437.000	0.2315
1,2-Dichlorobenzene	2.00	23061.0000	0.9642	5.00	61778.0000	1.005	20.0	277112.000	1.035
1,2-Dichloroethane	2.00	18581.0000	0.3412	5.00	47378.0000	0.3424	20.0	197856.000	0.3368
1,3,5-Trimethylbenzene	2.00	40103.0000	1.677	5.00	104856.000	1.705	20.0	479389.000	1.790
1,3-Dichlorobenzene	2.00	24767.0000	1.036	5.00	62198.0000	1.012	20.0	298856.000	1.116
1,3-Dichloropropane	2.00	14980.0000	0.3733	5.00	39443.0000	0.3854	20.0	173817.000	0.4006
1,4-Dichlorobenzene	2.00	26415.0000	1.104	5.00	67318.0000	1.095	20.0	306622.000	1.145
2,2-Dichloropropane	2.00	17438.0000	0.3202	5.00	44562.0000	0.3221	20.0	196822.000	0.3350
2-Butanone	2.00	5706.00000	0.1048	5.00	14049.0000	0.1015	20.0	56974.0000	0.09700
2-Chloroethyl Vinyl Ether	2.00	3796.00000	0.06970	5.00	10861.0000	0.07850	20.0	48512.0000	0.08260
2-Chlorotoluene	2.00	41875.0000	1.751	5.00	101410.000	1.649	20.0	459280.000	1.715
2-Hexanone	2.00	7109.00000	0.1771	5.00	19942.0000	0.1949	20.0	86136.0000	0.1985
4-Chlorotoluene	2.00	33676.0000	1.408	5.00	83893.0000	1.364	20.0	382158.000	1.427
4-Methyl-2-Pentanone	2.00	2805.00000	0.05150	5.00	9293.00000	0.06720	20.0	39939.0000	0.06800
Acetone	2.00	4678.00000	0.08590	5.00	10667.0000	0.07710	20.0	41729.0000	0.07100
Benzene	2.00	44436.0000	0.8161	5.00	112881.000	0.8158	20.0	484162.000	0.8242
Bromobenzene	2.00	13352.0000	0.5582	5.00	36839.0000	0.5991	20.0	157508.000	0.5880
Bromochloromethane	2.00	6913.00000	0.1270	5.00	19222.0000	0.1389	20.0	82749.0000	0.1409
Bromodichloromethane	2.00	16701.0000	0.3067	5.00	41802.0000	0.3021	20.0	185127.000	0.3151
Bromomethane	2.00	6477.00000	0.1189	5.00	14663.0000	0.1060	20.0	63201.0000	0.1076
Carbon Disulfide	2.00	37881.0000	0.6957	5.00	95415.0000	0.6896	20.0	414465.000	0.7055
Carbon Tetrachloride	2.00	18594.0000	0.3415	5.00	46155.0000	0.3336	20.0	202157.000	0.3441

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Column ID: F

Analyte	WG298037-08			WG298037-09			WG298037-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	579803.000	0.3935	100	1169071.00	0.3930	200	2689288.00	0.4016
1,2-Dichloropropane	50.0	360129.000	0.2444	100	729056.000	0.2451	200	1701370.00	0.2541
Chloroform	50.0	610626.000	0.4144	100	1242530.00	0.4177	200	2898430.00	0.4329
Ethylbenzene	50.0	512660.000	0.4623	100	1078105.00	0.4813	200	2756336.00	0.5291
Toluene	50.0	1322122.00	1.192	100	2703446.00	1.207	200	6236990.00	1.197
Vinyl Chloride	50.0	333082.000	0.2260	100	616817.000	0.2073	200	1146578.00	0.1712
1,1,2,2-Tetrachloroethane	50.0	280586.000	0.3973	100	566584.000	0.3822	200	1302476.00	0.3892
1,1-Dichloroethane	50.0	676772.000	0.4593	100	1364129.00	0.4586	200	3169469.00	0.4733
Bromoform	50.0	222973.000	0.2011	100	473119.000	0.2112	200	1120148.00	0.2150
Chlorobenzene	50.0	935028.000	0.8432	100	1944261.00	0.8680	200	4735611.00	0.9090
Chloromethane	50.0	576649.000	0.3913	100	1218284.00	0.4095	200	2541115.00	0.3795
1,1,1,2-Tetrachloroethane	50.0	367760.000	0.3317	100	767901.000	0.3428	200	1922695.00	0.3691
1,1,1-Trichloroethane	50.0	558801.000	0.3792	100	1134828.00	0.3815	200	2629019.00	0.3926
1,1,2-Trichloroethane	50.0	236883.000	0.2136	100	478386.000	0.2136	200	1102879.00	0.2117
1,1-Dichloropropene	50.0	462034.000	0.3136	100	934681.000	0.3142	200	2150648.00	0.3212
1,2,3-Trichlorobenzene	50.0	480908.000	0.6810	100	1026647.00	0.6926	200	2551783.00	0.7624
1,2,3-Trichloropropane	50.0	85818.0000	0.1215	100	175922.000	0.1187	200	403057.000	0.1204
1,2,4-Trichlorobenzene	50.0	541248.000	0.7664	100	1198242.00	0.8083	200	3015983.00	0.9011
1,2,4-Trimethylbenzene	50.0	1340621.00	1.898	100	2891139.00	1.950	200	6579879.00	1.966
1,2-Dibromo-3-Chloropropane	50.0	55182.0000	0.07810	100	117388.000	0.07920	200	266536.000	0.07960
1,2-Dibromoethane	50.0	246569.000	0.2224	100	495834.000	0.2214	200	1151459.00	0.2210
1,2-Dichlorobenzene	50.0	736080.000	1.042	100	1616491.00	1.091	200	3857106.00	1.152
1,2-Dichloroethane	50.0	497068.000	0.3373	100	992038.000	0.3335	200	2285845.00	0.3414
1,3,5-Trimethylbenzene	50.0	1277250.00	1.809	100	2721136.00	1.836	200	6311769.00	1.886
1,3-Dichlorobenzene	50.0	798713.000	1.131	100	1740447.00	1.174	200	4223390.00	1.262
1,3-Dichloropropane	50.0	423411.000	0.3818	100	867789.000	0.3874	200	2003180.00	0.3845
1,4-Dichlorobenzene	50.0	824841.000	1.168	100	1799972.00	1.214	200	4376516.00	1.308
2,2-Dichloropropane	50.0	504906.000	0.3426	100	1035330.00	0.3480	200	2381786.00	0.3557
2-Butanone	50.0	140668.000	0.09550	100	291787.000	0.09810	200	624244.000	0.09320
2-Chloroethyl Vinyl Ether	50.0	118727.000	0.08060	100	227306.000	0.07640	200	513097.000	0.07660
2-Chlorotoluene	50.0	1233005.00	1.746	100	2386086.00	1.610	200	5510822.00	1.647
2-Hexanone	50.0	215176.000	0.1940	100	442642.000	0.1976	200	949208.000	0.1822
4-Chlorotoluene	50.0	1009271.00	1.429	100	2195338.00	1.481	200	5223151.00	1.561
4-Methyl-2-Pentanone	50.0	97499.0000	0.06620	100	195515.000	0.06570	200	427783.000	0.06390
Acetone	50.0	103793.000	0.07040	100	198400.000	0.06670	200	417770.000	0.06240
Benzene	50.0	1236698.00	0.8393	100	2542879.00	0.8548	200	5916147.00	0.8835
Bromobenzene	50.0	413545.000	0.5856	100	864663.000	0.5833	200	2115016.00	0.6319
Bromochloromethane	50.0	207150.000	0.1406	100	419994.000	0.1412	200	977698.000	0.1460
Bromodichloromethane	50.0	464083.000	0.3149	100	948152.000	0.3187	200	2209297.00	0.3299
Bromomethane	50.0	177078.000	0.1202	100	369246.000	0.1241	200	893855.000	0.1335
Carbon Disulfide	50.0	1076752.00	0.7307	100	2236798.00	0.7519	200	5220967.00	0.7797
Carbon Tetrachloride	50.0	520656.000	0.3533	100	1068298.00	0.3591	200	2450326.00	0.3659

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Column ID: F

Analyte	WG298037-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1,2-Tetrachloroethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,1-Dichloropropene	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA
1,2,4-Trimethylbenzene	NA	NA	NA
1,2-Dibromo-3-Chloropropane	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
1,3,5-Trimethylbenzene	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA
1,3-Dichloropropane	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA
2,2-Dichloropropane	NA	NA	NA
2-Butanone	300	937378.000	0.09140
2-Chloroethyl Vinyl Ether	300	1007067.00	0.09820
2-Chlorotoluene	NA	NA	NA
2-Hexanone	300	1408699.00	0.1893
4-Chlorotoluene	NA	NA	NA
4-Methyl-2-Pentanone	300	657989.000	0.06410
Acetone	300	619565.000	0.06040
Benzene	NA	NA	NA
Bromobenzene	NA	NA	NA
Bromochloromethane	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA

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Initial Calibration Date: 24-MAR-09 16:13
Column ID: F

Analyte	WG298037-02			WG298037-03			WG298037-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	NA	NA	NA	0.400	1591.00000	0.1442	1.00	4023.00000	0.1493
Dibromochloromethane	0.300	1554.00000	0.2347	0.400	1902.00000	0.2325	1.00	6180.00000	0.3092
Dibromomethane	NA	NA	NA	0.400	1430.00000	0.1296	1.00	3106.00000	0.1153
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	1.00	7638.00000	0.2835
Hexachlorobutadiene	NA	NA	NA	0.400	1452.00000	0.3013	1.00	4088.00000	0.3459
Isopropylbenzene	0.300	7791.00000	1.177	0.400	10394.00000	1.271	1.00	25953.00000	1.299
Methylene Chloride	NA	NA	NA	0.400	5061.00000	0.4587	1.00	8729.00000	0.3240
Naphthalene	NA	NA	NA	0.400	5766.00000	1.196	1.00	22693.00000	1.920
Styrene	0.300	4320.00000	0.6525	0.400	5795.00000	0.7083	1.00	15937.00000	0.7974
Tetrachloroethene	0.300	1867.00000	0.2820	0.400	1715.00000	0.2096	1.00	5009.00000	0.2506
Trichloroethene	0.300	2446.00000	0.2713	0.400	2630.00000	0.2384	1.00	6349.00000	0.2357
Trichlorofluoromethane	NA	NA	NA	0.400	3368.00000	0.3053	1.00	9359.00000	0.3474
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	0.300	1938.00000	0.2150	0.400	2496.00000	0.2262	1.00	6364.00000	0.2362
cis-1,3-Dichloropropene	0.300	2397.00000	0.2659	0.400	3366.00000	0.3051	1.00	9199.00000	0.3415
m-,p-Xylene	0.600	5971.00000	0.4509	0.800	8495.00000	0.5192	2.00	21142.00000	0.5289
n-Butylbenzene	0.300	5802.00000	1.504	0.400	6853.00000	1.422	1.00	20028.00000	1.695
n-Propylbenzene	0.300	8603.00000	2.230	0.400	10982.00000	2.279	1.00	30872.00000	2.612
o-Xylene	0.300	2899.00000	0.4379	0.400	4062.00000	0.4965	1.00	10073.00000	0.5040
p-Isopropyltoluene	0.300	7068.00000	1.832	0.400	8894.00000	1.846	1.00	24605.00000	2.082
sec-Butylbenzene	0.300	7167.00000	1.858	0.400	9968.00000	2.068	1.00	25893.00000	2.191
tert-Butylbenzene	0.300	1166.00000	0.3023	0.400	1702.00000	0.3532	1.00	4532.00000	0.3835
trans-1,2-Dichloroethene	0.300	1583.00000	0.1756	0.400	2336.00000	0.2117	1.00	6420.00000	0.2383
trans-1,3-Dichloropropene	NA	NA	NA	0.400	2731.00000	0.3338	1.00	8277.00000	0.4141

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Login Number: L09030649
Analytical Method: 8260BInstrument ID: HPMS11
Initial Calibration Date: 24-MAR-09 16:13
Column ID: F

Analyte	WG298037-05			WG298037-06			WG298037-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	2.00	8827.00000	0.1621	5.00	22797.00000	0.1648	20.0	100745.000	0.1715
Dibromochloromethane	2.00	10886.00000	0.2713	5.00	29047.00000	0.2838	20.0	133218.000	0.3070
Dibromomethane	2.00	6590.00000	0.1210	5.00	16142.00000	0.1167	20.0	69432.00000	0.1182
Dichlorodifluoromethane	2.00	15967.00000	0.2932	5.00	39866.00000	0.2881	20.0	171248.000	0.2915
Hexachlorobutadiene	2.00	7958.00000	0.3327	5.00	20881.00000	0.3396	20.0	91575.00000	0.3419
Isopropylbenzene	2.00	49598.00000	1.236	5.00	129423.000	1.265	20.0	565628.000	1.304
Methylene Chloride	2.00	14485.00000	0.2660	5.00	32452.00000	0.2345	20.0	130660.000	0.2224
Naphthalene	2.00	32553.00000	1.361	5.00	83151.00000	1.352	20.0	386437.000	1.443
Styrene	2.00	29800.00000	0.7426	5.00	82444.00000	0.8056	20.0	377805.000	0.8707
Tetrachloroethene	2.00	9691.00000	0.2415	5.00	25828.00000	0.2524	20.0	108977.000	0.2511
Trichloroethene	2.00	12266.00000	0.2253	5.00	32335.00000	0.2337	20.0	139644.000	0.2377
Trichlorofluoromethane	2.00	20730.00000	0.3807	5.00	51091.00000	0.3693	20.0	227329.000	0.3870
Vinyl Acetate	2.00	16910.00000	0.3105	5.00	44728.00000	0.3233	20.0	210518.000	0.3584
cis-1,2-Dichloroethene	2.00	12735.00000	0.2339	5.00	30824.00000	0.2228	20.0	136012.000	0.2315
cis-1,3-Dichloropropene	2.00	17008.00000	0.3123	5.00	47625.00000	0.3442	20.0	209061.000	0.3559
m-,p-Xylene	4.00	40850.00000	0.5090	10.0	106016.000	0.5180	40.0	473660.000	0.5458
n-Butylbenzene	2.00	38115.00000	1.594	5.00	101722.000	1.654	20.0	468852.000	1.750
n-Propylbenzene	2.00	59196.00000	2.475	5.00	153835.000	2.502	20.0	701331.000	2.618
o-Xylene	2.00	19552.00000	0.4872	5.00	51505.00000	0.5033	20.0	228640.000	0.5269
p-Isopropyltoluene	2.00	46142.00000	1.929	5.00	118438.000	1.926	20.0	548088.000	2.046
sec-Butylbenzene	2.00	52104.00000	2.178	5.00	130440.000	2.121	20.0	588368.000	2.196
tert-Butylbenzene	2.00	10248.00000	0.4285	5.00	24179.00000	0.3932	20.0	110738.000	0.4134
trans-1,2-Dichloroethene	2.00	11788.00000	0.2165	5.00	27663.00000	0.1999	20.0	126921.000	0.2160
trans-1,3-Dichloropropene	2.00	15986.00000	0.3983	5.00	43124.00000	0.4214	20.0	193520.000	0.4460

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Login Number: L09030649
Analytical Method: 8260BInstrument ID: HPMS11
Initial Calibration Date: 24-MAR-09 16:13
Column ID: F

Analyte	WG298037-08			WG298037-09			WG298037-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	50.0	254145.000	0.1725	100	530648.000	0.1784	200	1044373.00	0.1560
Dibromochloromethane	50.0	333344.000	0.3006	100	686985.000	0.3067	200	1619686.00	0.3109
Dibromomethane	50.0	175585.000	0.1192	100	350247.000	0.1177	200	806815.000	0.1205
Dichlorodifluoromethane	50.0	425773.000	0.2889	100	877873.000	0.2951	200	1731352.00	0.2586
Hexachlorobutadiene	50.0	249092.000	0.3527	100	546064.000	0.3684	200	1344885.00	0.4018
Isopropylbenzene	50.0	1502158.00	1.355	100	3156212.00	1.409	200	7165388.00	1.375
Methylene Chloride	50.0	331551.000	0.2250	100	666355.000	0.2240	200	1511421.00	0.2257
Naphthalene	50.0	1011880.00	1.433	100	2168885.00	1.463	200	4991829.00	1.491
Styrene	50.0	1007269.00	0.9084	100	2151247.00	0.9604	200	5225880.00	1.003
Tetrachloroethene	50.0	279346.000	0.2519	100	579303.000	0.2586	200	1393088.00	0.2674
Trichloroethene	50.0	350891.000	0.2381	100	727250.000	0.2445	200	1716867.00	0.2564
Trichlorofluoromethane	50.0	550441.000	0.3735	100	1172659.00	0.3942	200	2579083.00	0.3852
Vinyl Acetate	50.0	559518.000	0.3797	100	910134.000	0.3060	200	1642451.00	0.2453
cis-1,2-Dichloroethene	50.0	349043.000	0.2369	100	703764.000	0.2366	200	1652152.00	0.2467
cis-1,3-Dichloropropene	50.0	532139.000	0.3611	100	1078562.00	0.3626	200	2537448.00	0.3790
m-,p-Xylene	100	1263585.00	0.5698	200	2708056.00	0.6045	400	6480254.00	0.6220
n-Butylbenzene	50.0	1282046.00	1.815	100	2821605.00	1.903	200	6251511.00	1.868
n-Propylbenzene	50.0	1831752.00	2.594	100	3834960.00	2.587	200	8094142.00	2.418
o-Xylene	50.0	599725.000	0.5408	100	1256006.00	0.5608	200	3103348.00	0.5957
p-Isopropyltoluene	50.0	1484149.00	2.102	100	3245750.00	2.190	200	7247294.00	2.165
sec-Butylbenzene	50.0	1579952.00	2.237	100	3401770.00	2.295	200	7581033.00	2.265
tert-Butylbenzene	50.0	290047.000	0.4107	100	610353.000	0.4117	200	1539178.00	0.4599
trans-1,2-Dichloroethene	50.0	320489.000	0.2175	100	655428.000	0.2203	200	1542208.00	0.2303
trans-1,3-Dichloropropene	50.0	494943.000	0.4463	100	995016.000	0.4442	200	2342864.00	0.4497

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Login Number: L09030649
Analytical Method: 8260B

Instrument ID: HPMS11
Initial Calibration Date: 24-MAR-09 16:13
Column ID: F

Analyte	WG298037-11		
	CONC	RESP	RF
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Dibromomethane	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA
Isopropylbenzene	NA	NA	NA
Methylene Chloride	NA	NA	NA
Naphthalene	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA
Vinyl Acetate	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-, p-Xylene	NA	NA	NA
n-Butylbenzene	NA	NA	NA
n-Propylbenzene	NA	NA	NA
o-Xylene	NA	NA	NA
p-Isopropyltoluene	NA	NA	NA
sec-Butylbenzene	NA	NA	NA
tert-Butylbenzene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

INT_CAL - Modified 03/06/2008
PDF File ID: 1357739
Report generated 04/08/2009 08:43



Login Number: L09030649 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
ICal Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	20.0	ug/L	0.395	0.100	30	
1,1-Dichloroethene	CCC	20.0	21.5	ug/L	0.202	7.30	30	
1,2-Dichloropropane	CCC	20.0	20.1	ug/L	0.271	0.300	30	
Ethylbenzene	CCC	20.0	21.9	ug/L	0.394	9.30	30	
Toluene	CCC	20.0	20.8	ug/L	1.18	4.20	30	
Vinyl Chloride	CCC	20.0	19.1	ug/L	0.263	4.60	30	
Bromoform	SPCC	20.0	20.5	ug/L	0.184	2.50	30	
Chlorobenzene	SPCC	20.0	21.2	ug/L	0.782	6.10	30	
Chloromethane	SPCC	20.0	20.3	ug/L	0.419	1.60	30	
1,1-Dichloroethane	SPCC	20.0	20.0	ug/L	0.473	0.100	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	20.5	ug/L	0.740	2.50	30	
Acetone		20.0	19.5	ug/L	0.0517	2.30	30	
Benzene		20.0	20.4	ug/L	0.900	1.80	30	
Bromobenzene		20.0	23.1	ug/L	0.887	15.4	30	
Bromochloromethane		20.0	20.6	ug/L	0.113	2.80	30	
Bromodichloromethane		20.0	21.5	ug/L	0.290	7.60	30	
Bromomethane		20.0	19.7	ug/L	0.169	1.50	30	
2-Butanone		20.0	19.7	ug/L	0.0805	1.30	30	
n-Butylbenzene		20.0	20.7	ug/L	1.63	3.30	30	
sec-Butylbenzene		20.0	23.5	ug/L	3.39	17.3	30	
tert-Butylbenzene		20.0	20.5	ug/L	0.661	2.40	30	
Carbon Disulfide		20.0	19.6	ug/L	0.685	2.10	30	
Carbon Tetrachloride		20.0	21.0	ug/L	0.290	5.20	30	
Dibromochloromethane		20.0	19.3	ug/L	0.293	3.50	30	
Chloroethane		20.0	22.3	ug/L	0.137	11.7	30	
2-Chloroethyl Vinyl Ether		20.0	19.6	ug/L	0.104	2.20	30	
2-Chlorotoluene		20.0	22.0	ug/L	2.31	9.90	30	
4-Chlorotoluene		20.0	22.0	ug/L	1.71	10.0	30	
1,2-Dibromo-3-Chloropropane		20.0	21.0	ug/L	0.135	4.80	30	
1,2-Dibromoethane		20.0	19.7	ug/L	0.222	1.70	30	
Dibromomethane		20.0	20.8	ug/L	0.118	4.20	30	
1,2-Dichlorobenzene		20.0	20.6	ug/L	1.31	3.20	30	
1,3-Dichlorobenzene		20.0	21.6	ug/L	1.27	8.00	30	
1,4-Dichlorobenzene		20.0	19.9	ug/L	1.21	0.500	30	
Dichlorodifluoromethane		20.0	24.1	ug/L	0.276	20.4	30	
1,2-Dichloroethane		20.0	19.8	ug/L	0.301	1.10	30	
cis-1,2-Dichloroethene		20.0	21.3	ug/L	0.250	6.30	30	
trans-1,2-Dichloroethene		20.0	21.2	ug/L	0.229	6.10	30	
1,3-Dichloropropane		20.0	19.2	ug/L	0.390	3.90	30	
2,2-Dichloropropane		20.0	20.2	ug/L	0.341	0.900	30	
cis-1,3-Dichloropropene		20.0	21.0	ug/L	0.314	5.10	30	
trans-1,3-Dichloropropene		20.0	17.3	ug/L	0.347	13.6	30	

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Version 1.5 PDF File ID: 1357740
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Login Number: L09030649 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
ICal Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
1,1-Dichloropropene	20.0	20.5	ug/L	0.303	2.60	30	
2-Hexanone	20.0	19.4	ug/L	0.128	3.10	30	
Hexachlorobutadiene	20.0	24.5	ug/L	0.566	22.7	30	
Isopropylbenzene	20.0	18.2	ug/L	1.12	9.00	30	
p-Isopropyltoluene	20.0	21.6	ug/L	2.70	8.20	30	
4-Methyl-2-Pentanone	20.0	20.6	ug/L	0.0640	3.10	30	
Methylene Chloride	20.0	21.5	ug/L	0.229	7.60	30	
Naphthalene	20.0	23.3	ug/L	1.41	16.5	30	
n-Propylbenzene	20.0	19.9	ug/L	2.43	0.700	30	
Styrene	20.0	19.7	ug/L	0.587	1.70	30	
1,1,1,2-Tetrachloroethane	20.0	18.4	ug/L	0.333	8.00	30	
Tetrachloroethene	20.0	20.4	ug/L	0.271	2.10	30	
1,2,3-Trichlorobenzene	20.0	21.4	ug/L	0.981	6.80	30	
1,2,4-Trichlorobenzene	20.0	24.7	ug/L	0.931	23.3	30	
1,1,1-Trichloroethane	20.0	20.4	ug/L	0.341	1.80	30	
1,1,2-Trichloroethane	20.0	19.6	ug/L	0.226	2.20	30	
Trichloroethene	20.0	21.1	ug/L	0.245	5.30	30	
Trichlorofluoromethane	20.0	20.9	ug/L	0.367	4.60	30	
1,2,3-Trichloropropane	20.0	21.3	ug/L	0.229	6.30	30	
1,2,4-Trimethylbenzene	20.0	23.5	ug/L	2.81	17.3	30	
1,3,5-Trimethylbenzene	20.0	22.5	ug/L	3.48	12.6	30	
Vinyl Acetate	20.0	14.1	ug/L	0.286	29.4	40	
o-Xylene	20.0	20.9	ug/L	0.473	4.60	30	
m-,p-Xylene	40.0	41.0	ug/L	0.428	2.40	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030649 Run Date: 03/24/2009 Sample ID: WG298037-12
Instrument ID: HPMS11 Run Time: 18:17 Method: 8260B
File ID: 11M58029 Analyst: WTD QC Key: STD
ICal Workgroup: WG298037 Cal ID: HPMS11 - 24-MAR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	20.2	ug/L	0.418	1.00	30	
1,1-Dichloroethene	CCC	20.0	20.5	ug/L	0.390	2.60	30	
1,2-Dichloropropane	CCC	20.0	20.4	ug/L	0.248	2.00	30	
Ethylbenzene	CCC	20.0	19.7	ug/L	0.442	1.30	30	
Toluene	CCC	20.0	20.1	ug/L	1.18	0.500	30	
Vinyl Chloride	CCC	20.0	18.8	ug/L	0.224	6.00	30	
Bromoform	SPCC	20.0	18.7	ug/L	0.189	6.60	30	
Chlorobenzene	SPCC	20.0	19.4	ug/L	0.823	3.10	30	
Chloromethane	SPCC	20.0	18.6	ug/L	0.370	6.80	30	
1,1-Dichloroethane	SPCC	20.0	20.8	ug/L	0.458	3.90	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	21.4	ug/L	0.422	7.10	30	
Acetone		20.0	21.2	ug/L	0.0748	5.90	30	
Benzene		20.0	19.6	ug/L	0.836	2.00	30	
Bromobenzene		20.0	20.3	ug/L	0.600	1.40	30	
Bromochloromethane		20.0	21.3	ug/L	0.143	6.30	30	
Bromodichloromethane		20.0	21.5	ug/L	0.326	7.30	30	
Bromomethane		20.0	20.2	ug/L	0.120	1.00	30	
2-Butanone		20.0	20.3	ug/L	0.0987	1.30	30	
n-Butylbenzene		20.0	21.1	ug/L	1.78	5.60	30	
sec-Butylbenzene		20.0	20.8	ug/L	2.24	4.00	30	
tert-Butylbenzene		20.0	20.9	ug/L	0.413	4.40	30	
Carbon Disulfide		20.0	19.0	ug/L	0.689	4.80	30	
Carbon Tetrachloride		20.0	20.5	ug/L	0.349	2.30	30	
Dibromochloromethane		20.0	20.5	ug/L	0.291	2.60	30	
Chloroethane		20.0	21.0	ug/L	0.170	5.00	30	
2-Chloroethyl Vinyl Ether		20.0	21.6	ug/L	0.0870	8.20	30	
2-Chlorotoluene		20.0	21.0	ug/L	1.77	5.20	30	
4-Chlorotoluene		20.0	19.9	ug/L	1.45	0.400	30	
1,2-Dibromo-3-Chloropropane		20.0	20.8	ug/L	0.0803	4.10	30	
1,2-Dibromoethane		20.0	20.4	ug/L	0.222	1.90	30	
Dibromomethane		20.0	19.9	ug/L	0.119	0.600	30	
1,2-Dichlorobenzene		20.0	19.5	ug/L	1.04	2.40	30	
1,3-Dichlorobenzene		20.0	19.9	ug/L	1.11	0.300	30	
1,4-Dichlorobenzene		20.0	19.2	ug/L	1.13	4.10	30	
Dichlorodifluoromethane		20.0	20.2	ug/L	0.288	0.900	30	
1,2-Dichloroethane		20.0	20.1	ug/L	0.340	0.600	30	
cis-1,2-Dichloroethene		20.0	20.9	ug/L	0.242	4.30	30	
trans-1,2-Dichloroethene		20.0	20.2	ug/L	0.216	1.10	30	
1,3-Dichloropropane		20.0	20.4	ug/L	0.391	1.90	30	
2,2-Dichloropropane		20.0	20.7	ug/L	0.336	3.70	30	
cis-1,3-Dichloropropene		20.0	20.7	ug/L	0.349	3.60	30	
trans-1,3-Dichloropropene		20.0	18.4	ug/L	0.386	7.90	30	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 1357740
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Login Number: L09030649 Run Date: 03/24/2009 Sample ID: WG298037-12
Instrument ID: HPMS11 Run Time: 18:17 Method: 8260B
File ID: 11M58029 Analyst: WTD QC Key: STD
ICal Workgroup: WG298037 Cal ID: HPMS11 - 24-MAR-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
1,1-Dichloropropene	20.0	20.5	ug/L	0.312	2.70	30	
2-Hexanone	20.0	20.6	ug/L	0.197	3.20	30	
Hexachlorobutadiene	20.0	19.9	ug/L	0.345	0.700	30	
Isopropylbenzene	20.0	17.6	ug/L	1.15	11.8	30	
p-Isopropyltoluene	20.0	19.9	ug/L	2.01	0.300	30	
4-Methyl-2-Pentanone	20.0	20.6	ug/L	0.0658	3.10	30	
Methylene Chloride	20.0	20.4	ug/L	0.230	2.00	30	
Naphthalene	20.0	19.8	ug/L	1.44	1.20	30	
n-Propylbenzene	20.0	21.2	ug/L	2.63	5.90	30	
Styrene	20.0	20.9	ug/L	0.866	4.60	30	
1,1,1,2-Tetrachloroethane	20.0	20.3	ug/L	0.320	1.60	30	
Tetrachloroethene	20.0	19.8	ug/L	0.250	0.900	30	
1,2,3-Trichlorobenzene	20.0	19.9	ug/L	0.676	0.500	30	
1,2,4-Trichlorobenzene	20.0	20.3	ug/L	0.752	1.40	30	
1,1,1-Trichloroethane	20.0	20.7	ug/L	0.380	3.50	30	
1,1,2-Trichloroethane	20.0	20.7	ug/L	0.217	3.40	30	
Trichloroethene	20.0	19.1	ug/L	0.232	4.30	30	
Trichlorofluoromethane	20.0	20.6	ug/L	0.380	3.20	30	
1,2,3-Trichloropropane	20.0	19.8	ug/L	0.129	0.800	30	
1,2,4-Trimethylbenzene	20.0	21.0	ug/L	1.92	5.10	30	
1,3,5-Trimethylbenzene	20.0	20.8	ug/L	1.83	3.90	30	
Vinyl Acetate	20.0	28.5	ug/L	0.456	42.4	40	*
o-Xylene	20.0	20.3	ug/L	0.525	1.60	30	
m-,p-Xylene	40.0	40.6	ug/L	0.549	1.40	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030649 Run Date: 03/30/2009 Sample ID: WG298504-02
Instrument ID: HPMS10 Run Time: 11:45 Method: 8260B
File ID: 10M71429 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298505 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	46.0	ug/L	0.365	7.91	20	
1,1-Dichloroethene	CCC	50.0	48.9	ug/L	0.184	2.30	20	
1,2-Dichloropropane	CCC	50.0	47.0	ug/L	0.254	6.10	20	
Ethylbenzene	CCC	50.0	54.3	ug/L	0.392	8.67	20	
Toluene	CCC	50.0	48.4	ug/L	1.10	3.19	20	
Vinyl Chloride	CCC	50.0	40.3	ug/L	0.215	19.5	20	
Bromoform	SPCC	50.0	52.5	ug/L	0.189	4.95	40	
Chlorobenzene	SPCC	50.0	49.8	ug/L	0.734	0.496	40	
Chloromethane	SPCC	50.0	45.1	ug/L	0.372	9.90	40	
1,1-Dichloroethane	SPCC	50.0	46.6	ug/L	0.440	6.86	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	49.3	ug/L	0.627	1.46	40	
Acetone		50.0	52.0	ug/L	0.0550	3.94	40	
Benzene		50.0	46.0	ug/L	0.812	8.10	40	
Bromobenzene		50.0	51.0	ug/L	0.784	1.97	40	
Bromochloromethane		50.0	48.4	ug/L	0.107	3.21	40	
Bromodichloromethane		50.0	48.7	ug/L	0.262	2.60	40	
Bromomethane		50.0	47.8	ug/L	0.164	4.46	40	
2-Butanone		50.0	55.7	ug/L	0.0908	11.4	40	
n-Butylbenzene		50.0	51.3	ug/L	1.62	2.65	40	
sec-Butylbenzene		50.0	42.1	ug/L	2.43	15.9	40	
tert-Butylbenzene		50.0	37.8	ug/L	0.488	24.4	40	
Carbon Disulfide		50.0	48.5	ug/L	0.678	3.08	40	
Carbon Tetrachloride		50.0	45.4	ug/L	0.251	9.24	40	
Dibromochloromethane		50.0	46.0	ug/L	0.280	7.92	40	
Chloroethane		50.0	44.9	ug/L	0.110	10.3	40	
2-Chloroethyl Vinyl Ether		50.0	47.1	ug/L	0.106	5.81	40	
2-Chlorotoluene		50.0	51.0	ug/L	2.14	2.04	40	
4-Chlorotoluene		50.0	50.7	ug/L	1.57	1.33	40	
1,2-Dibromo-3-Chloropropane		50.0	50.3	ug/L	0.121	0.541	40	
1,2-Dibromoethane		50.0	44.7	ug/L	0.202	10.6	40	
Dibromomethane		50.0	49.6	ug/L	0.113	0.770	40	
1,2-Dichlorobenzene		50.0	50.9	ug/L	1.29	1.73	40	
1,3-Dichlorobenzene		50.0	53.8	ug/L	1.26	7.55	40	
1,4-Dichlorobenzene		50.0	47.5	ug/L	1.15	4.95	40	
Dichlorodifluoromethane		50.0	47.8	ug/L	0.220	4.39	40	
1,2-Dichloroethane		50.0	48.6	ug/L	0.296	2.88	40	
cis-1,2-Dichloroethene		50.0	47.5	ug/L	0.224	5.01	40	
trans-1,2-Dichloroethene		50.0	48.0	ug/L	0.207	4.07	40	
1,3-Dichloropropane		50.0	44.1	ug/L	0.358	11.8	40	
2,2-Dichloropropane		50.0	44.9	ug/L	0.303	10.3	40	
cis-1,3-Dichloropropene		50.0	45.2	ug/L	0.269	9.67	40	
trans-1,3-Dichloropropene		50.0	43.0	ug/L	0.345	13.9	40	

CCV - Modified 03/05/2008
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Login Number: L09030649	Run Date: 03/30/2009	Sample ID: WG298504-02
Instrument ID: HPMS10	Run Time: 11:45	Method: 8260B
File ID: 10M71429	Analyst: TMB	QC Key: STD
Workgroup (AAB#): WG298505	Cal ID: HPMS10 - 18-MAR-09	
Matrix: WATER		

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	48.0	ug/L	0.284	3.95	40	
2-Hexanone	50.0	64.2	ug/L	0.170	28.3	40	
Hexachlorobutadiene	50.0	47.0	ug/L	0.434	5.91	40	
Isopropylbenzene	50.0	48.0	ug/L	1.18	3.98	40	
p-Isopropyltoluene	50.0	46.3	ug/L	2.20	7.35	40	
4-Methyl-2-Pentanone	50.0	55.3	ug/L	0.0685	10.5	40	
Methylene Chloride	50.0	46.9	ug/L	0.195	6.29	40	
Naphthalene	50.0	57.5	ug/L	1.39	14.9	40	
n-Propylbenzene	50.0	55.0	ug/L	2.69	9.97	40	
Styrene	50.0	51.3	ug/L	0.696	2.67	40	
1,1,1,2-Tetrachloroethane	50.0	42.3	ug/L	0.306	15.4	40	
Tetrachloroethene	50.0	46.7	ug/L	0.248	6.50	40	
1,2,3-Trichlorobenzene	50.0	47.6	ug/L	0.839	4.89	40	
1,2,4-Trichlorobenzene	50.0	58.4	ug/L	0.882	16.7	40	
1,1,1-Trichloroethane	50.0	47.4	ug/L	0.318	5.29	40	
1,1,2-Trichloroethane	50.0	46.5	ug/L	0.215	7.07	40	
Trichloroethene	50.0	48.3	ug/L	0.225	3.39	40	
Trichlorofluoromethane	50.0	48.6	ug/L	0.341	2.78	40	
1,2,3-Trichloropropane	50.0	47.3	ug/L	0.184	5.46	40	
1,2,4-Trimethylbenzene	50.0	50.7	ug/L	2.43	1.44	40	
1,3,5-Trimethylbenzene	50.0	42.2	ug/L	2.61	15.5	40	
Vinyl Acetate	50.0	45.9	ug/L	0.299	8.24	40	
o-Xylene	50.0	51.9	ug/L	0.470	3.81	40	
m-,p-Xylene	100	108	ug/L	0.454	8.49	40	
1,2-Dichloroethene	100	95.5	ug/L	0.215	4.54	40	
Xylenes	150	160	ug/L	0.462	6.93	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030649 Run Date: 03/31/2009 Sample ID: WG298609-02
Instrument ID: HPMS11 Run Time: 09:16 Method: 8260B
File ID: 11M58203 Analyst: WTD QC Key: STD
Workgroup (AAB#): WG298610 Cal ID: HPMS11 - 24-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	53.9	ug/L	0.446	7.75	20	
1,1-Dichloroethene	CCC	50.0	59.2	ug/L	0.450	18.4	20	
1,2-Dichloropropane	CCC	50.0	51.5	ug/L	0.250	2.98	20	
Ethylbenzene	CCC	50.0	54.6	ug/L	0.489	9.16	20	
Toluene	CCC	50.0	53.8	ug/L	1.27	7.59	20	
Vinyl Chloride	CCC	50.0	51.8	ug/L	0.247	3.65	20	
Bromoform	SPCC	50.0	43.9	ug/L	0.178	12.1	40	
Chlorobenzene	SPCC	50.0	51.8	ug/L	0.879	3.54	40	
Chloromethane	SPCC	50.0	89.5	ug/L	0.711	79.1	40	*
1,1-Dichloroethane	SPCC	50.0	56.0	ug/L	0.494	12.0	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	48.3	ug/L	0.377	3.33	40	
Acetone		50.0	49.1	ug/L	0.0694	1.71	40	
Benzene		50.0	50.6	ug/L	0.863	1.17	40	
Bromobenzene		50.0	50.7	ug/L	0.601	1.40	40	
Bromochloromethane		50.0	48.7	ug/L	0.131	2.63	40	
Bromodichloromethane		50.0	52.8	ug/L	0.321	5.60	40	
Bromomethane		50.0	13.8	ug/L	0.0330	72.3	40	*
2-Butanone		50.0	42.4	ug/L	0.0826	15.1	40	
n-Butylbenzene		50.0	63.1	ug/L	2.13	26.3	40	
sec-Butylbenzene		50.0	58.8	ug/L	2.54	17.6	40	
tert-Butylbenzene		50.0	56.8	ug/L	0.449	13.6	40	
Carbon Disulfide		50.0	53.3	ug/L	0.771	6.56	40	
Carbon Tetrachloride		50.0	56.6	ug/L	0.386	13.1	40	
Dibromochloromethane		50.0	51.6	ug/L	0.293	3.14	40	
Chloroethane		50.0	54.7	ug/L	0.178	9.40	40	
2-Chloroethyl Vinyl Ether		50.0	70.5	ug/L	0.113	41.0	40	*
2-Chlorotoluene		50.0	54.1	ug/L	1.83	8.29	40	
4-Chlorotoluene		50.0	58.1	ug/L	1.69	16.3	40	
1,2-Dibromo-3-Chloropropane		50.0	48.5	ug/L	0.0749	3.03	40	
1,2-Dibromoethane		50.0	47.2	ug/L	0.205	5.55	40	
Dibromomethane		50.0	46.5	ug/L	0.111	7.05	40	
1,2-Dichlorobenzene		50.0	49.2	ug/L	1.05	1.52	40	
1,3-Dichlorobenzene		50.0	53.0	ug/L	1.18	6.05	40	
1,4-Dichlorobenzene		50.0	51.1	ug/L	1.21	2.15	40	
Dichlorodifluoromethane		50.0	44.6	ug/L	0.255	10.7	40	
1,2-Dichloroethane		50.0	50.8	ug/L	0.344	1.67	40	
cis-1,2-Dichloroethene		50.0	52.0	ug/L	0.241	3.92	40	
trans-1,2-Dichloroethene		50.0	53.9	ug/L	0.231	7.80	40	
1,3-Dichloropropane		50.0	48.8	ug/L	0.374	2.49	40	
2,2-Dichloropropane		50.0	64.1	ug/L	0.416	28.2	40	
cis-1,3-Dichloropropene		50.0	53.0	ug/L	0.356	5.90	40	
trans-1,3-Dichloropropene		50.0	54.2	ug/L	0.454	8.34	40	

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Login Number: L09030649 Run Date: 03/31/2009 Sample ID: WG298609-02
Instrument ID: HPMS11 Run Time: 09:16 Method: 8260B
File ID: 11M58203 Analyst: WTD QC Key: STD
Workgroup (AAB#): WG298610 Cal ID: HPMS11 - 24-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	55.0	ug/L	0.335	10.0	40	
2-Hexanone	50.0	47.3	ug/L	0.180	5.37	40	
Hexachlorobutadiene	50.0	57.3	ug/L	0.399	14.7	40	
Isopropylbenzene	50.0	55.0	ug/L	1.43	10.1	40	
p-Isopropyltoluene	50.0	59.5	ug/L	2.40	19.1	40	
4-Methyl-2-Pentanone	50.0	44.7	ug/L	0.0571	10.5	40	
Methylene Chloride	50.0	51.7	ug/L	0.231	3.32	40	
Naphthalene	50.0	43.0	ug/L	1.25	14.1	40	
n-Propylbenzene	50.0	59.6	ug/L	2.96	19.3	40	
Styrene	50.0	56.2	ug/L	0.930	12.4	40	
1,1,1,2-Tetrachloroethane	50.0	55.6	ug/L	0.350	11.1	40	
Tetrachloroethene	50.0	52.3	ug/L	0.263	4.57	40	
1,2,3-Trichlorobenzene	50.0	47.4	ug/L	0.643	5.25	40	
1,2,4-Trichlorobenzene	50.0	51.5	ug/L	0.765	3.10	40	
1,1,1-Trichloroethane	50.0	55.6	ug/L	0.408	11.2	40	
1,1,2-Trichloroethane	50.0	47.4	ug/L	0.199	5.22	40	
Trichloroethene	50.0	48.2	ug/L	0.234	3.50	40	
Trichlorofluoromethane	50.0	56.0	ug/L	0.412	11.9	40	
1,2,3-Trichloropropane	50.0	44.6	ug/L	0.116	10.8	40	
1,2,4-Trimethylbenzene	50.0	58.1	ug/L	2.13	16.1	40	
1,3,5-Trimethylbenzene	50.0	58.1	ug/L	2.05	16.1	40	
Vinyl Acetate	50.0	57.7	ug/L	0.370	15.5	40	
o-Xylene	50.0	54.5	ug/L	0.564	9.03	40	
m-,p-Xylene	100	114	ug/L	0.616	13.8	40	
1,2-Dichloroethene	100	106	ug/L	0.236	5.86	40	
Xylenes	150	168	ug/L	0.590	12.2	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030649 Run Date: 03/31/2009 Sample ID: WG298624-02
Instrument ID: HPMS10 Run Time: 11:08 Method: 8260B
File ID: 10M71460 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298625 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	49.5	ug/L	0.392	0.909	20	
1,1-Dichloroethene	CCC	50.0	50.5	ug/L	0.190	1.07	20	
1,2-Dichloropropane	CCC	50.0	50.6	ug/L	0.273	1.12	20	
Ethylbenzene	CCC	50.0	59.6	ug/L	0.430	19.2	20	
Toluene	CCC	50.0	52.0	ug/L	1.18	3.92	20	
Vinyl Chloride	CCC	50.0	53.0	ug/L	0.277	5.98	20	
Bromoform	SPCC	50.0	54.5	ug/L	0.196	9.00	40	
Chlorobenzene	SPCC	50.0	53.4	ug/L	0.789	6.89	40	
Chloromethane	SPCC	50.0	49.5	ug/L	0.409	0.983	40	
1,1-Dichloroethane	SPCC	50.0	50.4	ug/L	0.476	0.732	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	47.6	ug/L	0.610	4.88	40	
Acetone		50.0	49.9	ug/L	0.0528	0.221	40	
Benzene		50.0	50.1	ug/L	0.886	0.291	40	
Bromobenzene		50.0	54.1	ug/L	0.832	8.22	40	
Bromochloromethane		50.0	50.9	ug/L	0.112	1.80	40	
Bromodichloromethane		50.0	53.1	ug/L	0.286	6.10	40	
Bromomethane		50.0	50.1	ug/L	0.172	0.296	40	
2-Butanone		50.0	55.3	ug/L	0.0902	10.7	40	
n-Butylbenzene		50.0	59.1	ug/L	1.86	18.2	40	
sec-Butylbenzene		50.0	45.6	ug/L	2.64	8.74	40	
tert-Butylbenzene		50.0	40.4	ug/L	0.521	19.3	40	
Carbon Disulfide		50.0	51.2	ug/L	0.716	2.32	40	
Carbon Tetrachloride		50.0	49.4	ug/L	0.273	1.24	40	
Dibromochloromethane		50.0	48.2	ug/L	0.293	3.52	40	
Chloroethane		50.0	43.7	ug/L	0.107	12.6	40	
2-Chloroethyl Vinyl Ether		50.0	47.4	ug/L	0.106	5.30	40	
2-Chlorotoluene		50.0	57.6	ug/L	2.42	15.2	40	
4-Chlorotoluene		50.0	54.5	ug/L	1.69	9.06	40	
1,2-Dibromo-3-Chloropropane		50.0	48.6	ug/L	0.117	2.85	40	
1,2-Dibromoethane		50.0	47.0	ug/L	0.212	5.95	40	
Dibromomethane		50.0	52.5	ug/L	0.119	5.09	40	
1,2-Dichlorobenzene		50.0	55.2	ug/L	1.40	10.3	40	
1,3-Dichlorobenzene		50.0	58.7	ug/L	1.38	17.4	40	
1,4-Dichlorobenzene		50.0	51.9	ug/L	1.26	3.80	40	
Dichlorodifluoromethane		50.0	49.0	ug/L	0.225	2.00	40	
1,2-Dichloroethane		50.0	51.3	ug/L	0.313	2.65	40	
cis-1,2-Dichloroethene		50.0	50.8	ug/L	0.239	1.53	40	
trans-1,2-Dichloroethene		50.0	50.7	ug/L	0.218	1.33	40	
1,3-Dichloropropane		50.0	46.6	ug/L	0.378	6.86	40	
2,2-Dichloropropane		50.0	47.5	ug/L	0.321	5.05	40	
cis-1,3-Dichloropropene		50.0	48.8	ug/L	0.291	2.45	40	
trans-1,3-Dichloropropene		50.0	45.4	ug/L	0.364	9.28	40	

CCV - Modified 03/05/2008
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Login Number: L09030649	Run Date: 03/31/2009	Sample ID: WG298624-02
Instrument ID: HPMS10	Run Time: 11:08	Method: 8260B
File ID: 10M71460	Analyst: TMB	QC Key: STD
Workgroup (AAB#): WG298625	Cal ID: HPMS10 - 18-MAR-09	
Matrix: WATER		

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	52.6	ug/L	0.311	5.12	40	
2-Hexanone		50.0	67.1	ug/L	0.177	34.2	40	
Hexachlorobutadiene		50.0	51.2	ug/L	0.472	2.36	40	
Isopropylbenzene		50.0	53.4	ug/L	1.32	6.77	40	
p-Isopropyltoluene		50.0	52.6	ug/L	2.46	5.25	40	
4-Methyl-2-Pentanone		50.0	57.8	ug/L	0.0717	15.6	40	
Methylene Chloride		50.0	49.7	ug/L	0.206	0.624	40	
Naphthalene		50.0	53.7	ug/L	1.30	7.34	40	
n-Propylbenzene		50.0	58.7	ug/L	2.87	17.5	40	
Styrene		50.0	54.9	ug/L	0.752	9.72	40	
1,1,1,2-Tetrachloroethane		50.0	46.4	ug/L	0.336	7.29	40	
Tetrachloroethene		50.0	50.6	ug/L	0.269	1.30	40	
1,2,3-Trichlorobenzene		50.0	47.5	ug/L	0.838	4.96	40	
1,2,4-Trichlorobenzene		50.0	61.1	ug/L	0.922	22.1	40	
1,1,1-Trichloroethane		50.0	51.2	ug/L	0.344	2.44	40	
1,1,2-Trichloroethane		50.0	48.2	ug/L	0.223	3.54	40	
Trichloroethene		50.0	53.0	ug/L	0.247	5.96	40	
Trichlorofluoromethane		50.0	50.1	ug/L	0.352	0.249	40	
1,2,3-Trichloropropane		50.0	47.4	ug/L	0.184	5.16	40	
1,2,4-Trimethylbenzene		50.0	58.0	ug/L	2.78	16.0	40	
1,3,5-Trimethylbenzene		50.0	47.2	ug/L	2.92	5.55	40	
Vinyl Acetate		50.0	41.8	ug/L	0.276	16.4	40	
o-Xylene		50.0	57.8	ug/L	0.522	15.5	40	
m-,p-Xylene		100	119	ug/L	0.498	19.1	40	
1,2-Dichloroethene		100	101	ug/L	0.229	1.43	40	
Xylenes		150	177	ug/L	0.510	17.9	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030649 Run Date: 04/02/2009 Sample ID: WG298841-02
Instrument ID: HPMS11 Run Time: 09:09 Method: 8260B
File ID: 11M58255 Analyst: WTD QC Key: STD
Workgroup (AAB#): WG298842 Cal ID: HPMS11 - 24-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	53.5	ug/L	0.443	7.07	20	
1,1-Dichloroethene	CCC	50.0	57.5	ug/L	0.437	14.9	20	
1,2-Dichloropropane	CCC	50.0	51.2	ug/L	0.248	2.31	20	
Ethylbenzene	CCC	50.0	53.5	ug/L	0.479	7.09	20	
Toluene	CCC	50.0	54.1	ug/L	1.27	8.26	20	
Vinyl Chloride	CCC	50.0	50.5	ug/L	0.241	1.02	20	
Bromoform	SPCC	50.0	43.0	ug/L	0.174	13.9	40	
Chlorobenzene	SPCC	50.0	51.0	ug/L	0.867	2.08	40	
Chloromethane	SPCC	50.0	56.0	ug/L	0.444	11.9	40	
1,1-Dichloroethane	SPCC	50.0	55.8	ug/L	0.492	11.6	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	49.7	ug/L	0.388	0.552	40	
Acetone		50.0	42.1	ug/L	0.0595	15.7	40	
Benzene		50.0	51.9	ug/L	0.884	3.72	40	
Bromobenzene		50.0	50.0	ug/L	0.592	0.0998	40	
Bromochloromethane		50.0	49.3	ug/L	0.133	1.36	40	
Bromodichloromethane		50.0	52.4	ug/L	0.319	4.73	40	
Bromomethane		50.0	49.4	ug/L	0.118	1.20	40	
2-Butanone		50.0	41.5	ug/L	0.0808	17.0	40	
n-Butylbenzene		50.0	63.0	ug/L	2.13	26.0	40	
sec-Butylbenzene		50.0	58.8	ug/L	2.53	17.5	40	
tert-Butylbenzene		50.0	55.8	ug/L	0.441	11.5	40	
Carbon Disulfide		50.0	58.7	ug/L	0.850	17.4	40	
Carbon Tetrachloride		50.0	54.8	ug/L	0.374	9.58	40	
Dibromochloromethane		50.0	51.1	ug/L	0.290	2.15	40	
Chloroethane		50.0	60.5	ug/L	0.196	20.9	40	
2-Chloroethyl Vinyl Ether		50.0	62.0	ug/L	0.0997	24.0	40	
2-Chlorotoluene		50.0	53.6	ug/L	1.81	7.23	40	
4-Chlorotoluene		50.0	59.9	ug/L	1.75	19.7	40	
1,2-Dibromo-3-Chloropropane		50.0	49.8	ug/L	0.0769	0.355	40	
1,2-Dibromoethane		50.0	47.1	ug/L	0.205	5.90	40	
Dibromomethane		50.0	46.3	ug/L	0.111	7.49	40	
1,2-Dichlorobenzene		50.0	49.0	ug/L	1.04	1.98	40	
1,3-Dichlorobenzene		50.0	52.2	ug/L	1.16	4.43	40	
1,4-Dichlorobenzene		50.0	50.7	ug/L	1.20	1.35	40	
Dichlorodifluoromethane		50.0	63.9	ug/L	0.365	27.9	40	
1,2-Dichloroethane		50.0	49.3	ug/L	0.333	1.47	40	
cis-1,2-Dichloroethene		50.0	53.3	ug/L	0.247	6.59	40	
trans-1,2-Dichloroethene		50.0	54.8	ug/L	0.235	9.64	40	
1,3-Dichloropropane		50.0	49.5	ug/L	0.380	1.00	40	
2,2-Dichloropropane		50.0	63.3	ug/L	0.411	26.7	40	
cis-1,3-Dichloropropene		50.0	54.1	ug/L	0.364	8.25	40	
trans-1,3-Dichloropropene		50.0	54.8	ug/L	0.459	9.52	40	

CCV - Modified 03/05/2008
PDF File ID: 1357742
Report generated 04/08/2009 08:43



Login Number: L09030649	Run Date: 04/02/2009	Sample ID: WG298841-02
Instrument ID: HPMS11	Run Time: 09:09	Method: 8260B
File ID: 11M58255	Analyst: WTD	QC Key: STD
Workgroup (AAB#): WG298842	Cal ID: HPMS11 - 24-MAR-09	
Matrix: WATER		

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene		50.0	55.1	ug/L	0.336	10.3	40	
2-Hexanone		50.0	42.1	ug/L	0.161	15.8	40	
Hexachlorobutadiene		50.0	56.3	ug/L	0.392	12.5	40	
Isopropylbenzene		50.0	54.5	ug/L	1.42	8.99	40	
p-Isopropyltoluene		50.0	58.0	ug/L	2.34	16.0	40	
4-Methyl-2-Pentanone		50.0	42.3	ug/L	0.0540	15.4	40	
Methylene Chloride		50.0	53.2	ug/L	0.238	6.31	40	
Naphthalene		50.0	43.1	ug/L	1.26	13.8	40	
n-Propylbenzene		50.0	59.9	ug/L	2.97	19.7	40	
Styrene		50.0	55.5	ug/L	0.919	11.1	40	
1,1,1,2-Tetrachloroethane		50.0	54.1	ug/L	0.341	8.15	40	
Tetrachloroethene		50.0	51.2	ug/L	0.258	2.38	40	
1,2,3-Trichlorobenzene		50.0	46.9	ug/L	0.636	6.23	40	
1,2,4-Trichlorobenzene		50.0	51.9	ug/L	0.769	3.72	40	
1,1,1-Trichloroethane		50.0	54.4	ug/L	0.399	8.81	40	
1,1,2-Trichloroethane		50.0	48.1	ug/L	0.202	3.81	40	
Trichloroethene		50.0	48.3	ug/L	0.234	3.32	40	
Trichlorofluoromethane		50.0	59.3	ug/L	0.436	18.6	40	
1,2,3-Trichloropropane		50.0	43.3	ug/L	0.113	13.3	40	
1,2,4-Trimethylbenzene		50.0	57.7	ug/L	2.11	15.4	40	
1,3,5-Trimethylbenzene		50.0	57.8	ug/L	2.04	15.6	40	
Vinyl Acetate		50.0	73.2	ug/L	0.469	46.4	40	*
o-Xylene		50.0	53.8	ug/L	0.556	7.56	40	
m-,p-Xylene		100	111	ug/L	0.600	11.0	40	
1,2-Dichloroethene		100	108	ug/L	0.241	8.12	40	
Xylenes		150	165	ug/L	0.578	9.85	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030649 Run Date: 04/07/2009 Sample ID: WG299155-02
Instrument ID: HPMS11 Run Time: 11:20 Method: 8260B
File ID: 11M58371 Analyst: WTD QC Key: STD
Workgroup (AAB#): WG299157 Cal ID: HPMS11 - 24-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	54.5	ug/L	0.451	9.02	20	
1,1-Dichloroethene	CCC	50.0	56.4	ug/L	0.428	12.8	20	
1,2-Dichloropropane	CCC	50.0	54.2	ug/L	0.263	8.42	20	
Ethylbenzene	CCC	50.0	54.4	ug/L	0.487	8.80	20	
Toluene	CCC	50.0	53.3	ug/L	1.25	6.64	20	
Vinyl Chloride	CCC	50.0	53.2	ug/L	0.254	6.33	20	
Bromoform	SPCC	50.0	47.9	ug/L	0.194	4.13	40	
Chlorobenzene	SPCC	50.0	52.0	ug/L	0.883	4.06	40	
Chloromethane	SPCC	50.0	54.1	ug/L	0.430	8.28	40	
1,1-Dichloroethane	SPCC	50.0	56.3	ug/L	0.496	12.6	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	53.6	ug/L	0.418	7.12	40	
Acetone		50.0	51.1	ug/L	0.0721	2.18	40	
Benzene		50.0	52.8	ug/L	0.900	5.58	40	
Bromobenzene		50.0	50.0	ug/L	0.592	0.0992	40	
Bromochloromethane		50.0	51.9	ug/L	0.140	3.87	40	
Bromodichloromethane		50.0	55.8	ug/L	0.340	11.7	40	
Bromomethane		50.0	49.2	ug/L	0.117	1.53	40	
2-Butanone		50.0	49.3	ug/L	0.0961	1.32	40	
n-Butylbenzene		50.0	62.1	ug/L	2.10	24.1	40	
sec-Butylbenzene		50.0	57.3	ug/L	2.47	14.5	40	
tert-Butylbenzene		50.0	54.9	ug/L	0.434	9.75	40	
Carbon Disulfide		50.0	54.3	ug/L	0.785	8.53	40	
Carbon Tetrachloride		50.0	57.5	ug/L	0.392	15.0	40	
Dibromochloromethane		50.0	54.0	ug/L	0.307	8.04	40	
Chloroethane		50.0	53.4	ug/L	0.174	6.87	40	
2-Chloroethyl Vinyl Ether		50.0	73.4	ug/L	0.118	46.8	40	*
2-Chlorotoluene		50.0	54.0	ug/L	1.82	8.10	40	
4-Chlorotoluene		50.0	57.4	ug/L	1.67	14.8	40	
1,2-Dibromo-3-Chloropropane		50.0	55.1	ug/L	0.0850	10.1	40	
1,2-Dibromoethane		50.0	51.3	ug/L	0.223	2.51	40	
Dibromomethane		50.0	52.0	ug/L	0.125	4.04	40	
1,2-Dichlorobenzene		50.0	49.9	ug/L	1.06	0.134	40	
1,3-Dichlorobenzene		50.0	52.5	ug/L	1.17	5.02	40	
1,4-Dichlorobenzene		50.0	51.1	ug/L	1.21	2.21	40	
Dichlorodifluoromethane		50.0	46.3	ug/L	0.265	7.31	40	
1,2-Dichloroethane		50.0	54.1	ug/L	0.366	8.19	40	
cis-1,2-Dichloroethene		50.0	53.2	ug/L	0.247	6.41	40	
trans-1,2-Dichloroethene		50.0	54.4	ug/L	0.233	8.82	40	
1,3-Dichloropropane		50.0	52.1	ug/L	0.400	4.30	40	
2,2-Dichloropropane		50.0	63.4	ug/L	0.411	26.8	40	
cis-1,3-Dichloropropene		50.0	57.4	ug/L	0.386	14.7	40	
trans-1,3-Dichloropropene		50.0	56.7	ug/L	0.476	13.5	40	

CCV - Modified 03/05/2008
PDF File ID: 1357742
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Login Number: L09030649 Run Date: 04/07/2009 Sample ID: WG299155-02
Instrument ID: HPMS11 Run Time: 11:20 Method: 8260B
File ID: 11M58371 Analyst: WTD QC Key: STD
Workgroup (AAB#): WG299157 Cal ID: HPMS11 - 24-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	55.8	ug/L	0.340	11.7	40	
2-Hexanone	50.0	51.2	ug/L	0.195	2.30	40	
Hexachlorobutadiene	50.0	53.4	ug/L	0.372	6.83	40	
Isopropylbenzene	50.0	54.8	ug/L	1.42	9.63	40	
p-Isopropyltoluene	50.0	56.9	ug/L	2.29	13.9	40	
4-Methyl-2-Pentanone	50.0	51.2	ug/L	0.0654	2.47	40	
Methylene Chloride	50.0	53.3	ug/L	0.239	6.55	40	
Naphthalene	50.0	48.9	ug/L	1.43	2.10	40	
n-Propylbenzene	50.0	58.4	ug/L	2.90	16.8	40	
Styrene	50.0	57.5	ug/L	0.951	14.9	40	
1,1,1,2-Tetrachloroethane	50.0	56.1	ug/L	0.353	12.3	40	
Tetrachloroethene	50.0	50.9	ug/L	0.256	1.88	40	
1,2,3-Trichlorobenzene	50.0	50.4	ug/L	0.684	0.755	40	
1,2,4-Trichlorobenzene	50.0	52.8	ug/L	0.783	5.62	40	
1,1,1-Trichloroethane	50.0	56.0	ug/L	0.411	12.1	40	
1,1,2-Trichloroethane	50.0	51.2	ug/L	0.215	2.32	40	
Trichloroethene	50.0	49.2	ug/L	0.239	1.54	40	
Trichlorofluoromethane	50.0	53.3	ug/L	0.392	6.57	40	
1,2,3-Trichloropropane	50.0	47.1	ug/L	0.123	5.77	40	
1,2,4-Trimethylbenzene	50.0	56.5	ug/L	2.07	13.0	40	
1,3,5-Trimethylbenzene	50.0	56.7	ug/L	2.00	13.5	40	
Vinyl Acetate	50.0	60.7	ug/L	0.389	21.3	40	
o-Xylene	50.0	54.7	ug/L	0.566	9.41	40	
m-,p-Xylene	100	113	ug/L	0.609	12.6	40	
1,2-Dichloroethene	100	108	ug/L	0.240	7.61	40	
Xylenes	150	167	ug/L	0.587	11.5	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030649
Instrument ID: HPMS10
Workgroup (AAB#): WG298505

CCV Number: WG298504-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298504-02	NA	NA	345726	876498	1224554
Upper Limit	NA	NA	691452	1752996	2449108
Lower Limit	NA	NA	172863	438249	612277
<u>L09030649-01</u>	<u>1.00</u>	<u>01</u>	<u>229750</u>	<u>564157</u>	<u>994703</u>
L09030649-02	1.00	01	226698	564850	960666
L09030649-03	10.0	DL01	225700	558419	964977
L09030649-08	50.0	DL01	194139	499611	874147
L09030649-11	50.0	DL01	210793	539257	942613
L09030649-12	50.0	DL01	207107	531966	928330
L09030649-13	50.0	DL01	212471	531386	933703
WG298505-01	1.00	01	246798	603728	1037062
WG298505-02	1.00	01	276854	781620	1109062
WG298505-03	1.00	01	270456	777736	1085832

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS11
Workgroup (AAB#): WG298610

CCV Number: WG298609-02
CAL ID: HPMS11 - 24-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298609-02	NA	NA	360689	601688	847116
Upper Limit	NA	NA	721378	1203376	1694232
Lower Limit	NA	NA	180345	300844	423558
<u>L09030649-03</u>	<u>50.0</u>	<u>DL02</u>	<u>340025</u>	<u>584142</u>	<u>799242</u>
L09030649-04	1.00	01	327916	572653	781336
L09030649-05	1.00	01	318894	553852	766988
L09030649-06	10.0	DL01	306544	537266	735157
L09030649-07	25.0	DL01	302630	526678	726973
L09030649-09	5.00	DL01	293716	512855	708128
WG298610-01	1.00	01	320116	546441	754795
WG298610-02	1.00	01	341747	577962	788757
WG298610-03	1.00	01	341426	590194	814538
WG298610-04	1.00	01	358258	590921	805124
WG298610-05	1.00	01	372398	602948	817544

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS10
Workgroup (AAB#): WG298625

CCV Number: WG298624-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298624-02	NA	NA	274941	690464	952817
Upper Limit	NA	NA	549882	1380928	1905634
Lower Limit	NA	NA	137471	345232	476409
<u>L09030649-10</u>	<u>50.0</u>	<u>DL01</u>	<u>191347</u>	<u>483554</u>	<u>822325</u>
L09030649-11	1000	DL02	194615	496122	854687
L09030649-12	1000	DL02	179674	471681	787785
L09030649-13	1000	DL02	181053	466018	769423
L09030649-14	50.0	DL01	183320	471989	809553
WG298625-01	1.00	01	193868	487777	832823
WG298625-02	1.00	01	222287	644999	893446
WG298625-03	1.00	01	221496	640292	905015

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS11
Workgroup (AAB#): WG298842

CCV Number: WG298841-02
CAL ID: HPMS11 - 24-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298841-02	NA	NA	447073	749615	1067920
Upper Limit	NA	NA	894146	1499230	2135840
Lower Limit	NA	NA	223537	374808	533960
<u>L09030649-14</u>	<u>200</u>	<u>DL03</u>	<u>335840</u>	<u>605366</u>	<u>819384</u>
WG298842-01	1.00	01	361278	645708	883804
WG298842-02	1.00	01	403693	667698	915137
WG298842-03	1.00	01	415447	696721	932515

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS11
Workgroup (AAB#): WG299157

CCV Number: WG299155-02
CAL ID: HPMS11 - 24-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG299155-02	NA	NA	393839	633480	848898
Upper Limit	NA	NA	787678	1266960	1697796
Lower Limit	NA	NA	196920	316740	424449
<u>L09030649-07</u>	<u>50.0</u>	<u>DL02</u>	<u>275250</u>	<u>486089</u>	<u>663345</u>
WG299157-01	1.00	01	338112	602883	826107
WG299157-02	1.00	01	392138	650621	862196
WG299157-03	1.00	01	341492	598433	817866
WG299157-04	1.00	01	403142	671216	900883
WG299157-05	1.00	01	410960	685879	915913

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS10
Workgroup (AAB#): WG298505

CCV Number: WG298504-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298504-02	NA	NA	17.46	14.45	10.6
Upper Limit	NA	NA	17.96	14.95	11.1
Lower Limit	NA	NA	16.96	13.95	10.1
<u>L09030649-01</u>	<u>1.00</u>	<u>01</u>	<u>17.46</u>	<u>14.45</u>	<u>10.59</u>
L09030649-02	1.00	01	17.46	14.45	10.6
L09030649-03	10.0	DL01	17.46	14.45	10.6
L09030649-08	50.0	DL01	17.46	14.45	10.6
L09030649-11	50.0	DL01	17.46	14.45	10.6
L09030649-12	50.0	DL01	17.46	14.45	10.6
L09030649-13	50.0	DL01	17.46	14.45	10.59
WG298505-01	1.00	01	17.46	14.45	10.59
WG298505-02	1.00	01	17.46	14.45	10.6
WG298505-03	1.00	01	17.46	14.45	10.6

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS11
Workgroup (AAB#): WG298610

CCV Number: WG298609-02
CAL ID: HPMS11 - 24-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298609-02	NA	NA	16.48	13.68	10.07
Upper Limit	NA	NA	16.98	14.18	10.57
Lower Limit	NA	NA	15.98	13.18	9.57
L09030649-03	50.0	DL02	16.481	13.679	10.061
L09030649-04	1.00	01	16.481	13.679	10.06
L09030649-05	1.00	01	16.482	13.68	10.061
L09030649-06	10.0	DL01	16.481	13.679	10.06
L09030649-07	25.0	DL01	16.482	13.68	10.061
L09030649-09	5.00	DL01	16.481	13.679	10.061
WG298610-01	1.00	01	16.481	13.679	10.071
WG298610-02	1.00	01	16.481	13.679	10.06
WG298610-03	1.00	01	16.482	13.68	10.061
WG298610-04	1.00	01	16.482	13.68	10.061
WG298610-05	1.00	01	16.482	13.679	10.061

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS10
Workgroup (AAB#): WG298625

CCV Number: WG298624-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298624-02	NA	NA	17.46	14.45	10.6
Upper Limit	NA	NA	17.96	14.95	11.1
Lower Limit	NA	NA	16.96	13.95	10.1
L09030649-10	50.0	DL01	17.46	14.45	10.6
L09030649-11	1000	DL02	17.46	14.45	10.6
L09030649-12	1000	DL02	17.46	14.45	10.6
L09030649-13	1000	DL02	17.46	14.45	10.6
L09030649-14	50.0	DL01	17.46	14.45	10.6
WG298625-01	1.00	01	17.46	14.45	10.6
WG298625-02	1.00	01	17.46	14.45	10.6
WG298625-03	1.00	01	17.46	14.45	10.59

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS11
Workgroup (AAB#): WG298842

CCV Number: WG298841-02
CAL ID: HPMS11 - 24-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298841-02	NA	NA	16.48	13.68	10.07
Upper Limit	NA	NA	16.98	14.18	10.57
Lower Limit	NA	NA	15.98	13.18	9.57
L09030649-14	200	DL03	16.482	13.68	10.061
WG298842-01	1.00	01	16.482	13.679	10.071
WG298842-02	1.00	01	16.481	13.679	10.061
WG298842-03	1.00	01	16.482	13.68	10.061

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030649
Instrument ID: HPMS11
Workgroup (AAB#): WG299157

CCV Number: WG299155-02
CAL ID: HPMS11 - 24-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG299155-02	NA	NA	16.48	13.68	10.06
Upper Limit	NA	NA	16.98	14.18	10.56
Lower Limit	NA	NA	15.98	13.18	9.56
L09030649-07	50.0	DL02	16.481	13.679	10.071
WG299157-01	1.00	01	16.482	13.68	10.071
WG299157-02	1.00	01	16.481	13.679	10.061
WG299157-03	1.00	01	16.481	13.679	10.071
WG299157-04	1.00	01	16.482	13.679	10.061
WG299157-05	1.00	01	16.481	13.679	10.061

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

LABORATORY REPORT

00087742

L09030649

04/08/09 10:26

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025Project: Longhorn AAPSite: LHAAP-16P.O. Number: 389869/ 390836 (GWTP)**Sample Analysis Summary**

Client ID	Lab ID	Method	Dilution	Date Received
16WW21-032409	L09030649-01	300.0	3	28-MAR-09
16WW21-032409-FD	L09030649-02	300.0	3	28-MAR-09
16WW41-032409	L09030649-03	300.0	25	28-MAR-09
16WW42-032409	L09030649-04	300.0	3	28-MAR-09
16WW31-032409	L09030649-05	300.0	15	28-MAR-09
16WW40-032409	L09030649-06	300.0	40	28-MAR-09



Report Number: **L09030649**Report Date : **April 8, 2009**

00087743

Sample Number: **L09030649-01**
Client ID: **16WW21-032409**
Matrix: **Water**
Workgroup Number: **WG298547**
Collect Date: **03/24/2009 10:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **3**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/28/2009 14:31**
Cal Date: **10/29/2008 15:17**
Run Date: **03/28/2009 20:36**
File ID: **I20328092036.24**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	63.6		0.600	0.300

Report Number: **L09030649**Report Date : **April 8, 2009**

00087744

Sample Number: **L09030649-02**
Client ID: **16WW21-032409-FD**
Matrix: **Water**
Workgroup Number: **WG298547**
Collect Date: **03/24/2009 10:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **3**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/28/2009 14:31**
Cal Date: **10/29/2008 15:17**
Run Date: **03/28/2009 20:54**
File ID: **I20328092054.25**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	63.4		0.600	0.300

Report Number: **L09030649**Report Date : **April 8, 2009**

00087745

Sample Number: **L09030649-03**
Client ID: **16WW41-032409**
Matrix: **Water**
Workgroup Number: **WG298547**
Collect Date: **03/24/2009 10:45**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **25**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/28/2009 14:31**
Cal Date: **10/29/2008 15:17**
Run Date: **03/28/2009 21:11**
File ID: **I20328092111.26**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	474		5.00	2.50

Report Number: **L09030649**Report Date : **April 8, 2009**

00087746

Sample Number: **L09030649-04**
Client ID: **16WW42-032409**
Matrix: **Water**
Workgroup Number: **WG298547**
Collect Date: **03/24/2009 14:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **3**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/28/2009 14:31**
Cal Date: **10/29/2008 15:17**
Run Date: **03/28/2009 21:46**
File ID: **I20328092146.28**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	58.4		0.600	0.300

Report Number: **L09030649**
Report Date : **April 8, 2009**

00087747

Sample Number: **L09030649-05**
Client ID: **16WW31-032409**
Matrix: **Water**
Workgroup Number: **WG298547**
Collect Date: **03/24/2009 13:15**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **15**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/28/2009 14:31**
Cal Date: **10/29/2008 15:17**
Run Date: **03/28/2009 21:29**
File ID: **I20328092129.27**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	295		3.00	1.50

Report Number: **L09030649**Report Date : **April 8, 2009**

00087748

Sample Number: **L09030649-06**
Client ID: **16WW40-032409**
Matrix: **Water**
Workgroup Number: **WG298547**
Collect Date: **03/24/2009 15:30**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **JWR**
Dilution: **40**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/28/2009 14:31**
Cal Date: **10/29/2008 15:17**
Run Date: **03/28/2009 22:03**
File ID: **I20328092203.29**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	881		8.00	4.00

2.2.1.2 QC Summary Data

The concentrations (ppm) of the calibration standards and the resulting area counts are used to determine the equation of a linear or quadratic plot.

The slope and y-intercept of that line are used to calculate the quantity of the analyzed unknown samples.

$\text{Amount(ppm)} = [(\text{slope})(\text{area count of unknown}) + \text{y-intercept}](\text{dilution})$

(The slope is the amt/area also identified as the CF or calibration factor)

Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 102908 HICAL IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 8

Maintenance Log ID: 26395

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG286387 (ICAL) WG286492
 Internal STD: NA Surrogate STD: NA Calibration STD: STD29498

Comments: Samples 0005-01 (MDL-Q) and 0006-01 (MDL-Q) were analyzed at two different levels of concentration each. One level is equal to the RL's for F, Cl, Br, SO4, whereas the other level is nearest to the RL's for NO2-N, NO3-N, and PO4-P.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I21029081332.01	WG286387-01 STD \#1	1	1		10/29/08 13:32
2	I21029081350.02	WG286387-02 STD \#2	1	1		10/29/08 13:50
3	I21029081407.03	WG286387-03 STD \#3	1	1		10/29/08 14:07
4	I21029081424.04	WG286387-04 STD \#4	1	1		10/29/08 14:24
5	I21029081442.05	WG286387-05 STD \#5	1	1		10/29/08 14:42
6	I21029081459.06	WG286387-06 STD \#6	1	1		10/29/08 14:59
7	I21029081517.07	WG286387-07 STD \#7	1	1		10/29/08 15:17
8	I21029081534.08	WG286387-08 ALT STD	1	1		10/29/08 15:34
9	I21029081551.09	ELUENT	1	1		10/29/08 15:51
10	I21029081609.10	DI WATER	1	1		10/29/08 16:09
11	I21029081626.11	WG286496-01 ANION CCV	1	1		10/29/08 16:26
12	I21029081644.12	WG286496-02 ANION CCB	1	1		10/29/08 16:44
13	I21029081701.13	WG286492-01 ANION BLANK	1	1		10/29/08 17:01
14	I21029081718.14	WG286492-02 ANION LCS	1	1		10/29/08 17:18
15	I21029081736.15	L08100005-01 MDL (F, Cl, Br, SO4)	1	1		10/29/08 17:36
16	I21029081753.16	L08100006-01 MDL (F, Cl, Br, SO4)	1	1		10/29/08 17:53
17	I21029081811.17	L08100005-01 MDL (NO2, NO3, PO4)	1	1		10/29/08 18:11
18	I21029081828.18	L08100006-01 MDL (NO2, NO3, PO4)	1	1		10/29/08 18:28
19	I21029081846.19	Test (Level \#5) CCV	1	1		10/29/08 18:46
20	I21029081903.20	Test (Level \#5) CCV	1	1		10/29/08 19:03
21	I21029081920.21	WG286496-03 ANION CCV	1	1		10/29/08 19:20
22	I21029081938.22	WG286496-04 ANION CCB	1	1		10/29/08 19:38
23	I21029081955.23	END	1	1		10/29/08 19:55

Comments

Seq.	Rerun	Dil.	Reason	Analytes



Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 032809 IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 9

Maintenance Log ID: 28152

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG298547
 Internal STD: NA Surrogate STD: NA Calibration STD: NA

Comments: Samples 0650 (04, 06, 10, 12, 14, 16) were analyzed at dilutions only, due to their high screen results for CL, which were greater than 200 ppm.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I20328091356.01	ELUENT	1	1		03/28/09 13:56
2	I20328091413.02	DI WATER	1	1		03/28/09 14:13
3	I20328091431.03	WG298550-01 ANION CCV	1	1		03/28/09 14:31
4	I20328091448.04	WG298550-02 ANION CCB	1	1		03/28/09 14:48
5	I20328091505.05	WG298547-01 ANION BLANK	1	1		03/28/09 15:05
6	I20328091523.06	WG298547-02 ANION LCS	1	1		03/28/09 15:23
7	I20328091540.07	L09030650-03 (NO3, SO4)	1	1		03/28/09 15:40
8	I20328091558.08	L09030650-01 (NO3, SO4)	1	1		03/28/09 15:58
9	I20328091615.09	L09030650-04 (NO3, SO4) 1/4	1	4		03/28/09 16:15
10	I20328091632.10	L09030650-06 (NO3, SO4) 1/4	1	4		03/28/09 16:32
11	I20328091650.11	L09030650-08 (NO3, SO4)	1	1		03/28/09 16:50
12	I20328091707.12	L09030650-10 (NO3, SO4) 1/3	1	3		03/28/09 17:07
13	I20328091725.13	L09030650-12 (NO3, SO4) 1/2	1	2		03/28/09 17:25
14	I20328091742.14	L09030650-14 (NO3, SO4) 1/3	1	3		03/28/09 17:42
15	I20328091800.15	WG298550-03 ANION CCV	1	1		03/28/09 18:00
16	I20328091817.16	WG298550-04 ANION CCB	1	1		03/28/09 18:17
17	I20328091834.17	L09030650-16 (NO3, SO4) 1/2 REF	1	2		03/28/09 18:34
18	I20328091852.18	WG298547-04 DUP 0650-16 (1/2)	1	2		03/28/09 18:52
19	I20328091909.19	WG298547-05 MS 0650-16 (1/2)	1	2		03/28/09 19:09
20	I20328091927.20	WG298547-06 MSD 0650-16 (1/2)	1	2		03/28/09 19:27
21	I20328091944.21	DI WATER	1	1		03/28/09 19:44
22	I20328092002.22	WG298550-05 ANION CCV	1	1		03/28/09 20:02
23	I20328092019.23	WG298550-06 ANION CCB	1	1		03/28/09 20:19
24	I20328092036.24	L09030649-01 (CL) 1/3	1	3		03/28/09 20:36
25	I20328092054.25	L09030649-02 (CL) 1/3	1	3		03/28/09 20:54
26	I20328092111.26	L09030649-03 (CL) 1/25	1	25		03/28/09 21:11
27	I20328092129.27	L09030649-05 (CL) 1/15	1	15		03/28/09 21:29
28	I20328092146.28	L09030649-04 (CL) 1/3	1	3		03/28/09 21:46
29	I20328092203.29	L09030649-06 (CL) 1/40 REF	1	40		03/28/09 22:03
30	I20328092221.30	WG298547-08 DUP 0649-06 (1/40)	1	40		03/28/09 22:21
31	I20328092238.31	DI WATER	1	1		03/28/09 22:38
32	I20328092256.32	WG298550-07 ANION CCV	1	1		03/28/09 22:56
33	I20328092313.33	WG298550-08 ANION CCB	1	1		03/28/09 23:13
34	I20328092331.34	END	1	1		03/28/09 23:31



Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 032809 IC2.SEQ
Analyst1: JWR Analyst2: NA
Method: 9056/300 SOP: IC1 Rev: 9

Maintenance Log ID: 28152

Column 1 ID: AS14A-4MM Column 2 ID: NA
Workgroups: WG298547
Internal STD: NA Surrogate STD: NA NA

Comments

Seq.	Rerun	Dil.	Reason	Analytes



Microbac Laboratories Inc.

Data Checklist

Date: 29-OCT-2008

Analyst: JWR

Analyst: NA

Method: 300/9056

Instrument: IC2

Curve Workgroup: WG286387

Runlog ID: 24978

Analytical Workgroups: 10-0005 (MDL-Q), 0006 (MDL-Q)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	X
Project/client specific requirements	NA
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
30-OCT-2008

John Richards

Secondary Reviewer:
03-NOV-2008

Michael Cohen

Microbac Laboratories Inc.

Data Checklist

Date: 28-MAR-2009

Analyst: JWR

Analyst: NA

Method: 300/9056

Instrument: IC2

Curve Workgroup: NA

Runlog ID: 27291

Analytical Workgroups: 03-0649, 0650

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual Integrations	NA
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
30-MAR-2009

John Richards

Secondary Reviewer:
31-MAR-2009

Michael Cohen

Analytical Method:300.0

AAB#:WG298547

Login Number:L09030649

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW21-032409	03/24/09	03/28/09	03/28/09	28	4.18	03/28/09	28	0.253	
16WW31-032409	03/24/09	03/28/09	03/28/09	28	4.05	03/28/09	28	0.290	
16WW41-032409	03/24/09	03/28/09	03/28/09	28	4.16	03/28/09	28	0.278	
16WW40-032409	03/24/09	03/28/09	03/28/09	28	3.96	03/28/09	28	0.314	
16WW21-032409-FD	03/24/09	03/28/09	03/28/09	28	4.18	03/28/09	28	0.266	
16WW42-032409	03/24/09	03/28/09	03/28/09	28	4.01	03/28/09	28	0.302	

* EXT = SEE PROJECT QAPP REQUIREMENTS

*ANAL = SEE PROJECT QAPP REQUIREMENTS

METHOD BLANK SUMMARY

Login Number: L09030649
 Blank File ID: I20328091505.05
 Prep Date: 03/28/09 14:31
 Analyzed Date: 03/28/09 15:05
 Analyst: JWR

Work Group: WG298547
 Blank Sample ID: WG298547-01
 Instrument ID: IC2
 Method: 300.0

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298547-02	I20328091523.06	03/28/09 15:23	01
DUP	WG298547-04	I20328091852.18	03/28/09 18:52	DL01
16WW21-032409	L09030649-01	I20328092036.24	03/28/09 20:36	DL01
16WW21-032409-FD	L09030649-02	I20328092054.25	03/28/09 20:54	DL01
16WW41-032409	L09030649-03	I20328092111.26	03/28/09 21:11	DL01
16WW31-032409	L09030649-05	I20328092129.27	03/28/09 21:29	DL01
16WW42-032409	L09030649-04	I20328092146.28	03/28/09 21:46	DL01
16WW40-032409	L09030649-06	I20328092203.29	03/28/09 22:03	DL01
DUP	WG298547-08	I20328092221.30	03/28/09 22:21	DL01

Login Number: L09030649 Prep Date: 03/28/09 14:31 Sample ID: WG298547-01
Instrument ID: IC2 Run Date: 03/28/09 15:05 Prep Method: 300.0
File ID: I20328091505.05 Analyst: JWR Method: 300.0
Workgroup (AAB#): WG298547 Matrix: Water Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: IC2 - 29-OCT-08

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Chloride	0.100	0.200	0.100	1	U

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1353527
30-MAR-2009 13:47



Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298547-02
Instrument ID: IC2 Run Time: 15:23 Prep Method: 300.0
File ID: I20328091523.06 Analyst: JWR Method: 300.0
Workgroup (AAB#): WG298547 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD29498 Cal ID: IC2 - 29-OCT-08

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	6.00	6.00	100	90 - 110	

Sample Ref: L09030650-16 Cal ID: IC2 - Worknum: WG298547
Instrument ID: IC2 Method: 9056
Sample ID: WG298547-03 File ID: I20328091834.17 Dil: 2 Matrix: WATER
Duplicate ID: WG298547-04 File ID: I20328091852.18 Dil: 2 Units: mg/L

Analyte	Sample	Duplicate	RPD	RPD Limit	Q
Chloride	266	266	0.0744	20	

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Sample Ref: L09030649-06 Cal ID: IC2 - Worknum: WG298547
Instrument ID: IC2 Method: 9056
Sample ID: WG298547-07 File ID: I20328092203.29 Dil: 40 Matrix: WATER
Duplicate ID: WG298547-08 File ID: I20328092221.30 Dil: 40 Units: mg/L

Analyte	Sample	Duplicate	RPD	RPD Limit	Q
Chloride	881	878	0.386	20	

FAILS RPD LIMIT

NOTE: This is an internal quality control sample.

Login Number: L09030649
Analytical Method: 300.0
ICAL Workgroup: WG286387

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Chloride		8.478	9.08		0.99900

R = Correlation coefficient; 0.995 minimum

R² = Coefficient of determination; 0.99 minimum

This method always uses quadratic calibration model (R²)

Login Number: L09030649
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-01			WG286387-02			WG286387-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	0.200	0.0220000000 0	9.091	2.00	0.2220000000	9.009	4.00	0.4540000000	8.811

Login Number: L09030649
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-04			WG286387-05			WG286387-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	6.00	0.695000000	8.633	8.00	0.944000000	8.475	12.0	1.45300000	8.259

INT_CAL - Modified 03/06/2008
PDF File ID: 1354370
Report generated 03/31/2009 10:35



Login Number: L09030649
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-07		
	CONC	RESP	RF
Chloride	48.0	6.79200000	7.067

INT_CAL - Modified 03/06/2008
PDF File ID: 1354370
Report generated 03/31/2009 10:35



Login Number: L09030649 Run Date: 10/29/2008 Sample ID: WG286387-08
Instrument ID: IC2 Run Time: 15:34 Method: 300.0
File ID: I21029081534.08 Analyst: JWR QC Key: STD
ICal Workgroup: WG286387 Cal ID: IC2 - 29-OCT-08

Analyte	Expected	Found	Units	RF	%D	UCL	Q
Chloride	6.00	6.16	mg/L	8.34	2.70	10	

* Exceeds %D Limit

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-02
Instrument ID: IC2 Run Time: 14:48 Method: 300.0
File ID: I20328091448.04 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298547 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-04
Instrument ID: IC2 Run Time: 18:17 Method: 300.0
File ID: I20328091817.16 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298547 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-06
Instrument ID: IC2 Run Time: 20:19 Method: 300.0
File ID: I20328092019.23 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298547 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-08
Instrument ID: IC2 Run Time: 23:13 Method: 300.0
File ID: I20328092313.33 Analyst: JWR Units: mg/L
Workgroup (AAB#): WG298547 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-01
Instrument ID: IC2 Run Time: 14:31 Method: 300.0
File ID: I20328091431.03 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298547 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.11	mg/L	8.42	1.90	10	

* Exceeds %D Criteria

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-03
Instrument ID: IC2 Run Time: 18:00 Method: 300.0
File ID: I20328091800.15 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298547 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.06	mg/L	8.50	0.933	10	

* Exceeds %D Criteria

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-05
Instrument ID: IC2 Run Time: 20:02 Method: 300.0
File ID: I20328092002.22 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298547 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.05	mg/L	8.51	0.817	10	

* Exceeds %D Criteria

Login Number: L09030649 Run Date: 03/28/2009 Sample ID: WG298550-07
Instrument ID: IC2 Run Time: 22:56 Method: 300.0
File ID: I20328092256.32 Analyst: JWR QC Key: STD
Workgroup (AAB#): WG298547 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.09	mg/L	8.45	1.42	10	

* Exceeds %D Criteria

3.0 Attachments

Microbac Laboratories Inc.
Analyst Listing
April 8, 2009

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
AM - ALISON J. MILLER	AML - ANTHONY M. LONG	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS	CAH - CHARLES A. HALL
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CSH - CHRIS S. HILL
CTB - CHRIS T. BUCINA	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	ECL - ERIC C. LAWSON	EDA - ERIN D. AGEE
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON
JKP - JACQUELINE K. PARSONS	JKT - JANE K. THOMPSON	JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES	JYH - JI Y. HU	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LHT - LANCE H. THOMPSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MICHAEL D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	NPM - NATHANIEL P. MILLER
PDM - PIERCE D. MORRIS	RAH - ROY A. HALSTEAD	RB - ROBERT BUCHANAN
REK - ROBERT E. KYER	RLK - ROBIN L. KLINGER	RWC - RODNEY W. CAMPBELL
SAV - SARAH A. VANDENBERG	SDH - SHANA D. HINYARD	SDL - SHELLY D. LENT
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	TDH - TRICIA D. HUCK
TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WTD - WADE T. DELONG	

List of Valid Qualifiers

April 08, 2009

Qualifier: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria fail. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Undetected; the concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

***Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.





Shaw® Shaw Environmental & Infrastructure, Inc.

3010 Briarpark Drive, Suite 400

Houston, TX 77042

(713) 996-4400

Chain of Custody

Laboratory Name: MICROBAC		Address: 158 Starlite Drive Marietta, Ohio		Contact: Stephanie Mossburg (740) 373-4071											
Project Name: Longhorn-MARC		Project Location: Karnack, Tx		Analysis and Method Desired (Indicate separate containers)											
Project No.: 117591.0005B004		Project Contact: Allen Willmore		Project Telephone No.: (713) 247-9292											
Point of Contact: Jennifer Hoang		Project Manager/Supervisor: Praveen Srivastav		Remarks: TRIP BLANK INCLUDED!!											
Telephone No.: (713) 996-4408															
Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location	Number of Containers	CHLORIDE	VOCs					
1	16WWV21-032409	3/24/09	10:15		X	GW	SITE 16	4	X	X					
2	16WW21-032409	3/24/09	10:15		X	GW	SITE 16	4	X	X					
3	16WW41-032409	3/24/09	10:45		X	GW	SITE 16	4	X	X					
4	16WW42-032409	3/24/09	14:15		X	GW	SITE 16	4	X	X					
5	16WW31-032409	3/24/09	13:15		X	GW	SITE 16	4	X	X					
6	16WW40-032509	3/25/09	15:30		X	GW	SITE 16	4	X	X					
7	~~16WW20-032509~~	~~3/25/09~~	~~17:00~~		X	GW	~~SITE 16~~	~~4~~	~~X~~	~~X~~					
8	~~16WW36-032609~~	~~3/26/09~~	~~08:00~~		X	GW	~~SITE 16~~	~~4~~	~~X~~	~~X~~					
9															
10															
Transfers Relinquished By (signature)		Date/Time		Transfers Accepted By (signature)		Date/Time		Special Instructions							
<i>M. Hill</i>		3/25/09 17:15		<i>[Signature]</i>				*48-hr TAT* *have* *48-hr TAT*							
								FedEx Airbill No.:							
				Laboratory <i>[Signature]</i>		3-28-09/10/09		Sampler's Signature <i>M. Hill</i>							
TAT: <i>24</i> Standard		Rush Date		Seals Intact? <i>Y</i>		Received Good Condition <i>Y</i>		Cold							



Shaw Shaw Environmental & Infrastructure, Inc.
3010 Briarpark Drive, Suite 400
Houston, TX 77042
(713) 996-4400

Chain of Custody

Laboratory Name: <u>MicroBAC</u>		Address: <u>158 Starlite Drive Marietta, Ohio</u>		Contact: <u>Stephanie Mosburg (713) 373-4071</u>												
Project Name: <u>Longhorn-MARC</u>		Project Location: <u>Karnack, Tx</u>		Analysis and Method Desired (Indicate separate containers)												
Project No.: <u>117591-00058004</u>		Project Contact: <u>Allen Willmore</u>		Project Telephone No.: <u>(713) 247-9292</u>												
Point of Contact: <u>Jennifer Heang</u>		Project Manager/Supervisor: <u>Praven Srivastav</u>		Number of Containers VOC <table border="1" style="width: 100%; height: 100px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>												
Telephone No.: <u>(713) 996-4408</u>																
Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location									
1	16FW08-032709	3/27/09	16:25		✓	W	SITE 16	3	X							
2	16FW07-032709	3/27/09	14:30		✓	W	SITE 16	3	X							
3	16FW06-032709	3/27/09	11:15		✓	W	SITE 16	3	X							
4	16FW05-032709	3/27/09	08:30		✓	W	SITE 16	3	X							
5	16FW04-032609	3/26/09	17:05		✓	W	SITE 16	3	X							
6	16FW03-032609	3/26/09	13:10		✓	W	SITE 16	3	X							
7	16FW02-032609	3/26/09	12:00		✓	W	SITE 16	3	X							
8	16FW01-032609	3/26/09	10:00		✓	W	SITE 16	3	X							
9																
10																
Transfers Relinquished By (signature)		Date/Time		Transfers Accepted By (signature)		Date/Time		Special Instructions 48-hour TAT								
<u>[Signature]</u>		3/27/09 17:15														
								FedEx Airbill No.:								
				Laboratory <u>[Signature]</u>		3/28/09/10		Sampler's Signature <u>[Signature]</u>								
TAT: <u>48-hr</u> Standard		Rush Date		Seals Intact? <u>Y</u> <u>N</u>		Received Good Condition <u>Y</u> <u>N</u> Cold										

Client:	SHAW - Longhorn			
Workorder Number:	B 24848			
Date Received:	3/28/09			
Delivered by:	() Fedx	(X) UPS	() Client	() Courier Time: 1028
Opened by:	DEL			
IR Temp Gun:	(X) G	() H		
Logged by:	L 0903 0644			

Cooler information

Cooler ID	Temp C	Airbill#	COC#	Other
2744	2	22047775004	5814	

Inspection Checklist

	Y	N	NA	Discrepancy ID
Were shipping coolers sealed?	X			
Were custody seals intact?	X			
Were cooler temperatures in range of 0 - 6?	X			
Was ice present?	X			
Were COC's received/ information complete/signed and dated?	X			
Were sample containers and labels intact and match COC?	X			
Were the correct containers and volumes received?	X			
Were correct preservatives used? (water only)			X	
Were pH ranges acceptable? (voa's excluded)			X	
Were VOA samples free of headspace (< 6mm)?	X			
Were samples received within EPA hold times?	X			

Discrepancy/Comments/Other Problems

Stored in walk-in over weekend
Note: Sample 16WW21-032409 has two samples, on bottles, second sample has FD after ID

Distribution

Name of Microbac representative:
Client/Company:
Person Contacted:
Date contacted:

Resolution/other comments:

Internal Chain of Custody Report

Login: L09030649

Account: 2773

Project: 2773.025

Samples: 14

Due Date: 31-MAR-2009

Samplenum **Container ID** **Products**
L09030649-03 567576 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Samplenum **Container ID** **Products**
L09030649-06 567582 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Samplenum **Container ID** **Products**
L09030649-11 567588 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030649

Account: 2773

Project: 2773.025

Samples: 14

Due Date: 31-MAR-2009

Samplenum **Container ID** **Products**
L09030649-01 567572 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Samplenum **Container ID** **Products**
L09030649-02 567575 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	30-MAR-2009 09:51	RLK	
2	ANALYZ	W1	SEM	30-MAR-2009 12:17	JWR	RLK
3	STORE	SEM	A1	30-MAR-2009 12:18	RLK	JWR

Samplenum **Container ID** **Products**
L09030649-09 567586 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030649

Account: 2773

Project: 2773.025

Samples: 14

Due Date: 31-MAR-2009

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030649-13	567590	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:04	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:04	MRT	RLK

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030649-05	567581	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	30-MAR-2009 09:51	RLK	
2	ANALYZ	W1	SEM	30-MAR-2009 12:17	JWR	RLK
3	STORE	SEM	A1	30-MAR-2009 12:18	RLK	JWR

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030649-12	567589	826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:04	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:04	MRT	RLK

A1 - Sample Archive (COLD)
 A2 - Sample Archive (AMBIENT)
 F1 - Volatiles Freezer in Login
 V1 - Volatiles Refrigerator in Login
 W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030649

Account: 2773

Project: 2773.025

Samples: 14

Due Date: 31-MAR-2009

Samplenum **Container ID** **Products**
L09030649-02 567574 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Samplenum **Container ID** **Products**
L09030649-04 567579 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	30-MAR-2009 09:51	RLK	
2	ANALYZ	W1	SEM	30-MAR-2009 12:17	JWR	RLK
3	STORE	SEM	A1	30-MAR-2009 12:18	RLK	JWR

Samplenum **Container ID** **Products**
L09030649-06 567583 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	30-MAR-2009 09:51	RLK	
2	ANALYZ	W1	SEM	30-MAR-2009 12:17	JWR	RLK
3	STORE	SEM	A1	30-MAR-2009 12:18	RLK	JWR

Samplenum **Container ID** **Products**
L09030649-07 567584 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030649

Account: 2773

Project: 2773.025

Samples: 14

Due Date: 31-MAR-2009

Samplenum **Container ID** **Products**
L09030649-14 567591 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:04	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:04	MRT	RLK

Samplenum **Container ID** **Products**
L09030649-01 567573 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	30-MAR-2009 09:51	RLK	
2	ANALYZ	W1	SEM	30-MAR-2009 12:17	JWR	RLK
3	STORE	SEM	A1	30-MAR-2009 12:18	RLK	JWR

Samplenum **Container ID** **Products**
L09030649-03 567577 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	W1	30-MAR-2009 09:51	RLK	
2	ANALYZ	W1	SEM	30-MAR-2009 12:17	JWR	RLK
3	STORE	SEM	A1	30-MAR-2009 12:18	RLK	JWR

Samplenum **Container ID** **Products**
L09030649-08 567585 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030649

Account: 2773

Project: 2773.025

Samples: 14

Due Date: 31-MAR-2009

Samplenum **Container ID** **Products**
L09030649-04 567578 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Samplenum **Container ID** **Products**
L09030649-05 567580 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Samplenum **Container ID** **Products**
L09030649-10 567587 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	30-MAR-2009 09:51	RLK	
2	ANALYZ	V1	ORG4	30-MAR-2009 10:03	MRT	RLK

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



ANALYTICAL REPORT

Job Number: 680-45945-1

Job Description: Shaw Longhorn

For:

Microbac Laboratories, Inc.

158 Starlite Drive

Marietta, OH 45750

Attention: Ms. Stephanie Mossburg



Approved for release.
Sheila Hoffman
Project Manager I
4/1/2009 4:59 PM

Sheila Hoffman

Project Manager I

sheila.hoffman@testamericainc.com

04/01/2009

The test results in this report meet NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted. Results pertain only to samples listed in this report. This report may not be reproduced, except in full, without the written approval of the laboratory. Questions should be directed to the person who signed this report.

Savannah Certifications and ID #s: A2LA: 0399.01; AL: 41450; ARDEQ: 88-0692; ARDOH; CA: 03217CA; CO; CT: PH0161; DE; FL: E87052; GA: 803; Guam; HI; IL: 200022; IN; IA: 353; KS: E-10322; KY EPPC: 90084; KY UST; LA DEQ: 30690; LA DHH: LA080008; ME: 2008022; MD: 250; MA: M-GA006; MI: 9925; MS; NFESC: 249; NV: GA00006; NJ: GA769; NM; NY: 10842; NC DWQ: 269; NC DHHS: 13701; PA: 68-00474; PR: GA00006; RI: LAO00244; SC: 98001001; TN: TN0296; TX: T104704185; USEPA: GA00006; VT: VT-87052; VA: 00302; WA; WV DEP: 094; WV DHHR: 9950 C; WI DNR: 999819810; WY/EPAR8: 8TMS-Q

TestAmerica Laboratories, Inc.

TestAmerica Savannah 5102 LaRoche Avenue, Savannah, GA 31404

Tel (912) 354-7858 Fax (912) 352-0165 www.testamericainc.com



Job Narrative
680-J45945-1**Comments**

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

General Chemistry

Method(s) 314.0: Samples 680-45945-2 and -3 were analyzed at dilutions due to Matrix of the samples and Matrix Conductivity Threshold of the instrument. The reporting limits have been adjusted accordingly.

No other analytical or quality issues were noted.

METHOD / ANALYST SUMMARY

Client: Microbac Laboratories, Inc.

Job Number: 680-45945-1

Method	Analyst	Analyst ID
EPA 314.0	Brazell, Connie	CB

SAMPLE SUMMARY

Client: Microbac Laboratories, Inc.

Job Number: 680-45945-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-45945-1	17WW11-033009	Water	03/30/2009 1220	03/31/2009 1015
680-45945-2	16WW36-033009	Water	03/30/2009 0800	03/31/2009 1015
680-45945-3	16WW28-033009	Water	03/30/2009 1620	03/31/2009 1015

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45945-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 17WW11-033009

Lab Sample ID: 680-45945-1

Client Matrix: Water

Date Sampled: 03/30/2009 12:20

Date Received: 03/31/2009 10:15

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	990			0.11	1.0	1.1	ug/L	134126	03/31/2009 20:31	10	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45945-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW36-033009

Lab Sample ID: 680-45945-2

Client Matrix: Water

Date Sampled: 03/30/2009 08:00

Date Received: 03/31/2009 10:15

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	5.5	U		0.11	1.0	5.5	ug/L	134126	03/31/2009 21:31	50	CB

Microbac Laboratories, Inc.
ATTN: Ms. Stephanie Mossburg

Job Number: 680-45945-1
Project: Shaw Longhorn
SDG Number: Shaw Longhorn

Client Sample ID: 16WW28-033009

Lab Sample ID: 680-45945-3

Client Matrix: Water

Date Sampled: 03/30/2009 16:20

Date Received: 03/31/2009 10:15

Test Method	CAS Number	Result	Q	Flag	MDL	MQL	SDL	Unit	Batch	Analysis Date/Time	D.F.	Analyst
Method: EPA 314.0,Water Perchlorate	14797-73-0	0.55	U		0.11	1.0	0.55	ug/L	134126	03/31/2009 22:31	5	CB

DATA REPORTING QUALIFIERS

Client: Microbac Laboratories, Inc.

Job Number: 680-45945-1

Lab Section	Qualifier	Description
HPLC	U	Indicates the analyte was analyzed for but not detected.

Quality Control Results

Client: Microbac Laboratories, Inc.

Job Number: 680-45945-1

Method Blank - Batch: 680-134126

Method: 314.0

Preparation: N/A

Lab Sample ID: MB 680-134126/2
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 03/31/2009 1816
 Date Prepared: N/A

Analysis Batch: 680-134126
 Prep Batch: N/A
 Units: ug/L

Instrument ID: ICCS200 - H
 Lab File ID: 0033.d
 Initial Weight/Volume:
 Final Weight/Volume: 5 mL
 Injection Volume: 0.25 uL

Analyte	Result	Qual	MDL	RL
Perchlorate	0.11	U	0.11	1.0

Lab Control Spike - Batch: 680-134126

Method: 314.0

Preparation: N/A

Lab Sample ID: LCS 680-134126/4
 Client Matrix: Water
 Dilution: 1.0
 Date Analyzed: 03/31/2009 1846
 Date Prepared: N/A

Analysis Batch: 680-134126
 Prep Batch: N/A
 Units: ug/L

Instrument ID: ICCS200 - H
 Lab File ID: 0035.d
 Initial Weight/Volume:
 Final Weight/Volume: 5 mL
 Injection Volume: 0.25 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Perchlorate	10.0	9.58	96	85 - 115	

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 680-134126

Method: 314.0

Preparation: N/A

MS Lab Sample ID: 680-45945-2
 Client Matrix: Water
 Dilution: 50
 Date Analyzed: 03/31/2009 2146
 Date Prepared: N/A

Analysis Batch: 680-134126
 Prep Batch: N/A

Instrument ID: ICCS200 - H
 Lab File ID: 0047.d
 Initial Weight/Volume:
 Final Weight/Volume: 5 mL
 Injection Volume: 0.25 uL

MSD Lab Sample ID: 680-45945-2
 Client Matrix: Water
 Dilution: 50
 Date Analyzed: 03/31/2009 2201
 Date Prepared: N/A

Analysis Batch: 680-134126
 Prep Batch: N/A

Instrument ID: ICCS200 - H
 Lab File ID: 0048.d
 Initial Weight/Volume:
 Final Weight/Volume: 5 mL
 Injection Volume: 0.25 uL

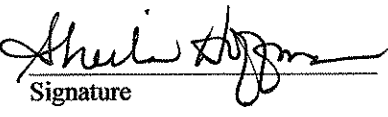
Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Perchlorate	108	111	80 - 120	3	15		

Calculations are performed before rounding to avoid round-off errors in calculated results.

This data package consists of this signature page, the Laboratory Review Checklist, and the following reportable data:

- ☒ Field chain-of-custody documentation
- ☒ Sample identification cross-reference
- ☒ Test reports (analytical data sheets) for each environmental sample that includes:
 - Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - Dilution factors
 - Preparation methods
 - Clean-up methods
 - TICs (if required for the project)
- ☐ Surrogate recovery data including:
 - Calculated %R
 - Laboratory surrogate QC limits
- ☒ Test reports / Summary forms for blank samples
- ☒ Test reports / Summary forms for laboratory control samples (LCSs) including:
 - LCS spiking amounts
 - Calculated %R for each analyte
 - Laboratory LCS QC limits
- ☒ Test reports for project matrix spike/matrix spike duplicates (MS/MSD) including:
 - Samples associated with MS/MSD clearly identified
 - MS/MSD spiking amounts
 - Concentration of each MS/MSD analyte measured in the parent and spiked samples
 - Calculated %Rs and relative percent differences (RPD)
 - Laboratory MS/MSD QC limits
- ☒ Laboratory analytical duplicate (if applicable) recovery and precision
 - Amount of analyte measured in the duplicate
 - Calculated RPD
 - Laboratory QC limits for analytical duplicates
- ☒ List of method quantitation limits for each analyte for each method and matrix
- ☒ Other problems and anomalies
- ☒ The Exception Report for every "No" or "Not Reviewed (NR)" item in the Laboratory Review Checklist

Release Statement: *I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exception reports. By my signature below, I affirm to the best of my knowledge that all problems/anomalies observed by the laboratory as having potential to affect the quality of the data have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.*

Sheila Hoffman  Project Manager 04/01/09
 Name (Printed) Signature Official Title Date

SDG / Log #: 68045945/ 680-45945

Fraction: 314.0

Date: 04.01.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134126
Instrument ID: ICH

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R1	OI (QA/PM)	Chain-of-Custody (COC)					
		Did each sample meet the laboratory's sample acceptance policy upon receipt? (This includes cooler temperatures, sample IDs, correct COC, etc.)	X				
		Are all sample receipt issues described in an exception report and noted in the case narrative?	X				
R2	OI (QA/PM)	Sample and Quality Control (QC) Identification					
		Are all field sample ID numbers cross-referenced to the laboratory ID numbers? (This information is included in the case narrative table and/or LIMS report.)	X				
		Are all laboratory ID numbers cross-referenced to the corresponding QC data? (This information is included on the forms and/or LIMS report.)	X				
R3	OI	Test Reports					
		Were all samples prepared within holding times?	X				
		Were all samples analyzed within holding times?	X				
		Were all hits >MQL (RL) within the instrument's calibration range?	X				
		If hits are not within the calibration range, have the data been flagged with the appropriate qualifiers and additional runs reported?			X		
		Were calculations reviewed by a peer or supervisor?	X				
		Were analyte identifications reviewed by a peer or supervisor?	X				
		Were sample quantitation limits reported for all undetected analytes? (This information is included on the forms and/or LIMS report.)	X				
		Were the results for soil and sediment samples reported on a dry weight basis?			X		
		Were % moisture (or solids) reported for all soil and sediment samples?			X		
		If required for the project, were TICs reported?			X		
R4	O	Surrogate Recovery Data					
		Were surrogates added prior to extraction, as required by the method?			X		
		Were all surrogate percent recoveries within the laboratory QC limits? (Note ANY failing surrogate in the Exception Report.)			X		
R5	OI	Test Reports / Summary Forms for Blanks					
		Were the appropriate type(s) of blanks analyzed?	X				
		Were blanks analyzed at the appropriate frequency?	X				
		Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	X				
		Were blank concentrations < MQL (RL)?	X				
R6	OI	Laboratory Control Samples (LCS):					
		Were all COCs included in the LCS? (Were full-list spikes used?)	X				
		Was each LCS taken through the entire analytical procedure, including preparation and, if applicable, cleanup steps?	X				
		Were LCSs analyzed at the required frequency?	X				
		Were LCS (and LCSD, if applicable) % Rs within laboratory QC limits? (Note ANY failing spike analyte in the Exception Report.)	X				
		If performed, was the LCSD %RPD within QC limits? (Note ANY failing spike analyte in the Exception Report.)			X		
R7	OI	Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Data					
		Were the project/method specified analytes included in the MS and MSD?	X				
		Were the MS/MSD analyzed at the appropriate frequency?	X				
		Were MS/MSD %Rs within the laboratory QC limits? (Note ANY failing spike analyte in the Exception Report.)	X				
		Were MS/MSD RPDs within laboratory QC limits? (Note ANY failing spike analyte in the Exception Report.)	X				

SDG / Log #: 68045945/ 680-45945

Fraction: 314.0

Date: 04.01.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134126
Instrument ID: ICH

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
R8	I	Analytical Duplicate Data					
		Were appropriate analytical duplicates analyzed for each matrix?			X		
		Were analytical duplicates analyzed at the appropriate frequency?			X		
		Were RPDs or relative standard deviations within the laboratory QC limits?			X		
R9	OI	Method Quantitation Limits (MQLs):					
		Are the MQLs (RLs) for each analyte included in the laboratory data package? (This information is included on the forms and/or LIMS report.)	X				
		Do the MQLs (RLs) correspond to the concentration of the lowest non-zero calibration standard, where applicable?	X				
		Have the unadjusted MQLs (RLs) been included in the laboratory data package? (This information is included on the forms and/or LIMS report.)	X				
R10	OI	Other Problems/Anomalies					
		Are all known problems, anomalies, and/or special conditions noted in the Laboratory Review Checklist and the Exception Report?	X				
		Were all necessary corrective actions performed for the reported data?	X				
		Was applicable and available technology used to lower the SQL (RL) to minimize the matrix interference effects on the sample results, as applicable?	X				
S1	O1	Initial Calibration (ICAL)					
		Were response factors and/or relative response factors for each analyte within QC limits?	X				
		Were percent RSD or correlation coefficient criteria met? (Note ANY use of Grand Mean in the Exception Report.)	X				
		Was the number of standards recommended in the method used for all analytes?	X				
		Were all points generated between the lowest and highest standard used to calculate the curve?	X				
		Are ICAL data available for all instruments used?	X				
		Has the initial calibration curve been verified using an appropriate second source standard? (Note any ICV outliers in the Exception Report.)	X				
S2	O1	Initial & Continuing Calibration Verification (ICCV & CCV)					
		Was the CCV analyzed at the method-required frequency?	X				
		Were percent differences for each analyte within the method-required QC limits? (Note ANY use of Grand Mean in the Exception Report.)	X				
		Was the absolute value of the analyte concentration in the inorganic CCB < MDL?			X		
S3	O	Mass Spectral Tuning:					
		Was the appropriate compound for the method used for tuning?			X		
		Were ion abundance data within the method-required QC limits?			X		
S4	OI	Internal Standards (IS):					
		Were IS area counts within the method-required QC limits?			X		
		Were IS retention times within the method-required QC limits?			X		
S5	OI	Raw Data					
		Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	X				
		Were data associated with manual integrations flagged on the raw data?	X				1
S6	O	Dual Column Confirmation					
		Did dual column confirmation results meet the method-required QC?			X		
S7	O	Tentatively Identified Compounds (TICs):					
		If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			X		
S8	I	Interference Check Sample (ICS) results:					
		Were percent recoveries within method QC limits?	X				
S9	I	Serial dilutions, Post Digestion Spikes, and Method of Standard Additions					
		Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			X		2

SDG / Log #:

68045945/ 680-45945

Fraction:

314.0

Date: 04.01.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134126
Instrument ID: ICH

# ¹	A ²	Description	Yes	No	NA ³	NR ⁴	ER# ⁵
S10	OI	Method Detection Limit (MDL) Studies					
		Has an MDL study been performed for each analyte?	X				
		Has a DCS been performed for each analyte within the last 3 months? (If not, then list the estimated completion date in the Exception Report.)	X				
		Does the DCS meet the acceptance criteria and support the MDL?	X				
		If the DCS does not meet criteria, has the associated MDL been raised to the appropriate level?	X				
S11	OI	Proficiency Test Reports:					
		Has the laboratory participated in the applicable proficiency tests or evaluation studies?	X				
S12	OI	Standards Documentation					
		Are all standards used NIST-traceable or obtained from other appropriate sources?	X				
S13	OI	Compound / Analyte Identification Procedures					
		Are the procedures for compound/analyte identification documented?	X				
S14	OI	Demonstration of Analyst Competency (DOC)					
		Has a DOC been performed as is consistent with NELAC Chapter 5C or ISO/IEC 4 for each analyst and analyte associated with this analysis?	X				
		Is documentation of the analyst's competency up-to-date and on file?	X				
S15	OI	Verification / Validation Documentation for Methods					
		Are all the methods used to generate the data documented, verified, and validated, where applicable?	X				
S16	OI	Laboratory Standard Operating Procedures (SOPs):					
		Are laboratory SOPs current and on file for each method performed?	X				

- Items identified by the letter "R" should be included in the laboratory data package submitted to the TCEQ in the TRRP-required report(s). Items identified by the letter "S" should be retained and made available upon request for the appropriate retention period.
- O = organic analyses; I = inorganic analyses; PM = Project Management; QA = Quality Assurance
- NA = Not applicable.
- NR = Not Reviewed.
- ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked).

SDG / Log #: 68045945/ 680-45945

Fraction: 314.0

Date: 04.01.09
Reviewer Name: C. Brazell
Prep Batch Numbers: 134126
Instrument ID: ICH

Exception Reports	
ER # ¹	DESCRIPTION
1	Samples 680-45945-1, 2MS and -2MSD required a manual integration due to an unresolved baseline.
2	Samples 680-45945-2 and -3 required a dilution due to the matrix conductivity threshold of the instrument. The reporting limit has been adjusted accordingly.
3	
4	

1. ER# = Exception Report identification number (an Exception Report should be completed for an item if "NR" or "No" is checked on the LCR).



Shaw® Shaw Environmental & Infrastructure, Inc.
3010 Briarpark Drive, Suite 400
Houston, TX 77042
(713) 996-4400

Chain of Custody

NO. 5810

00087801

Laboratory Name: TEST America		Address: 5102 La Roche Ave Savannah, Ga 31404		Contact: Sheila Hoffman 912-354-7858					
Project Name: Longhorn MARS		Project Location: Karnack, TX		Analysis and Method Desired (Indicate separate containers)					
Project No.: 117591-00058004		Project Contact: Allen Willmore		Number of Containers					
Point of Contact: Jennifer Hoang		Project Telephone No.: (713) 247-9297		Remarks					
Telephone No.: 713-996-4408		Project Manager/Supervisor: Praveen Srivastava		Perchlorate					
Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location	Date/Time	Special Instructions
1	17NNW11-033009	3/30/09	17:20		✓	W	SITE 17	1	24-HOUR TAT on ALL samples 2.1°C 680-45445
2	16NNW36-033009	3/30/09	0800		✓	W	SITE 16	1	
3	16NNW38-033009	3/30/09	17:20		✓	W	SITE 16	1	
4									
5									
6									
7									
8									
9									
10									
Transfers Relinquished By (signature)		Date/Time		Transfers Accepted By (signature)		Date/Time		Special Instructions	
<i>M. M. C.</i>		3/30/09 17:45		<i>Km</i>		3/31/09 10:5			
TAT: _____ Standard _____ Rush Date _____		Seals Intact? _____ Y _____ N _____		Received Good Condition _____ Y _____ N _____		Cold		FedEx Airbill No.: _____	
Laboratory		Sampler's Signature <i>M. M. C.</i>		Sampler's Signature <i>M. M. C.</i>					



158 Starlite Drive, Marietta, OH 45750 • T:740-373-4071 • F:740-373-4835 • <http://www.microbac.com>

Laboratory Report Number: L09030671

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories.

Review and compilation of your report was completed by Microbac's Sales and Service Team. If you have questions, comments or require further assistance regarding this report, please contact your team member noted in the reviewed box below at 800-373-4071. Team member e-mail addresses also appear here for your convenience.

Kathy Albertson	<i>Team Chemist/Data Specialist</i>	kalbertson@microbac.com
Stephanie Mossburg	<i>Team Chemist/Data Specialist</i>	smossburg@microbac.com
Tony Long	<i>Team Chemist/Data Specialist</i>	tlong@microbac.com
Amanda Fickiesen	<i>Client Services Specialist</i>	afickiesen@microbac.com
Annie Brown	<i>Client Services Specialist</i>	abrown@microbac.com
Jacqueline Parsons	<i>Team Assistant</i>	jparsons@microbac.com

This report was reviewed on April 06, 2009.

A handwritten signature in cursive script that reads "Stephanie Mossburg".

Stephanie Mossburg - Team Chemist/Data Specialist

I certify that all test results meet all of the requirements of the accrediting authority listed below. All results for soil samples are reported on a 'dry-weight' basis unless specified otherwise. Analytical results for water and wastes are reported on a 'as received' basis unless specified otherwise. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories.

This report was certified on April 06, 2009.

A handwritten signature in cursive script that reads "David E. Vandenberg".

David Vandenberg - Managing Director

State of origin: Texas

Accrediting authority: Texas Commission on Environmental Quality ID:T104704252-07-TX

QAPP: Microbac OVD

This report contains a total of 127 pages.

Look closer. Go further. Do more.



Microbac REPORT L09030671
PREPARED FOR Shaw E I, Inc.
WORK ID: LHAAP-16

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1.0 Introduction

Microbac Laboratories Inc.
REPORT NARRATIVE

Microbac Login No: L09030671

CHAIN OF CUSTODY: The chain of custody number was 5811.

SHIPMENT CONDITIONS: The chain of custody forms were received sealed in a cooler. The cooler temperature was 4 degrees C.

SAMPLE MANAGEMENT: All samples received were intact.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Microbac Laboratories Inc., both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.

Approved: 06-APR-09

<i>Stephanie Mossburg</i>

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

- ✓R1 Field chain-of-custody documentation;
- ✓R2 sample identification cross-reference;
- R3 Test reports (analytical data sheets) for each environmental sample that includes:
 - a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
 - b) dilution factors,
 - c) preparation methods,
 - d) Cleanup methods, and
 - e) If required for the project, tentatively identified compounds (TICs)
- ✓R4 Surrogate recovery data including:
 - a) Calculated recovery (%R) for each analyte, and
 - b) The laboratory's surrogate QC limits.
- ✓R5 Test reports/summary forms for blank samples;
- ✓R6 Test reports/summary forms for laboratory control samples (LCSs) including:
 - a) LCS spiking amount,
 - b) Calculated %R for each analyte, and
 - c) The laboratory's LCS QC limits.
- ✓R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:
 - a) Samples associated with the MS/MSD clearly identified,
 - b) MS/MSD spiking amounts,
 - c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
 - d) Calculated %R and relative percent differences (RPDs), and
 - e) The laboratory's MS/MSD QC limits
- ✓R8 Laboratory analytical duplicate (if applicable) recovery and precision:
 - a) the amount of analyte measured in the duplicate,
 - b) the calculated RPD, and
 - c) the laboratory's QC limits for analytical duplicates.
- ✓R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;
- ✓R10 Other problems or anomalies.
- ✓The exception Report for every "No" or "Not Reviewed (NR)" item IN laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, if applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

MIKE D. ALBERTSON



Volatiles Lab Supervisor

April 6, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030671
 Project Name: 798-LONGHORN
 Method: 8260B
 Prep Batch Number(s): WG298812, WG298625
 Reviewer Name: MIKE D. ALBERTSON
 LRC Date: April 06, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?	✓				
Were % moisture (or solids) reported for all soil and sediment samples?	✓				
If required for the project, TICs reported?			✓		
Surrogate recovery data					
Were surrogates added prior to extraction?	✓				
Were surrogate percent recoveries in all samples within the laboratory QC limits?		✓			1
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?		✓			2
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?	✓				
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?			✓		
Were MS/MSD analyzed at the appropriate frequency?			✓		
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?			✓		

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?			✓		
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?			✓		
Were analytical duplicates analyzed at the appropriate frequency?			✓		
Were RPDs or relative standard deviations within the laboratory QC limits?			✓		
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
ICAL					
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?			✓		
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?	✓				
Were ion abundance data within the method-required QC limits?	✓				
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?	✓				
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?	✓				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NR(2)	ER(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

EXCEPTIONS REPORT

ER# - Description

- 1) Toluene-d8 exceeded the upper control limit in sample 01. Dibromofluoromethane exceeded the upper control limit in the method blank analyzed 03/31/09 on HPMS-10.
- 2) Bromobenzene, 2-hexanone, 1,2,4-trichlorobenzene, and 1,2,4-trimethylbenzene exceeded the upper advisory limits in the LCS/LCSD analyzed 03/31/09 on HPMS-10.

Footnotes:

- (1) NA = Not applicable to method or project
- (2) NR = Not reviewed
- (3) ER# = Exception report number

This data Package consists of:

This signature page, the laboratory review checklists, and the following reportable data:

R1 Field chain-of-custody documentation;

R2 sample identification cross-reference;

R3 Test reports (analytical data sheets) for each environmental sample that includes:

- a) Items consistent with NELAC 5.13 or ISO/IEC 17025 Section 5.10
- b) dilution factors,
- c) preparation methods,
- d) Cleanup methods, and
- e) If required for the project, tentatively identified compounds (TICs)

R4 Surrogate recovery data including:

- a) Calculated recovery (%R) for each analyte, and
- b) The laboratory's surrogate QC limits.

✓ R5 Test reports/summary forms for blank samples;

✓ R6 Test reports/summary forms for laboratory control samples (LCSs) including:

- a) LCS spiking amount,
- b) Calculated %R for each analyte, and
- c) The laboratory's LCS QC limits.

R7 Test reports for project matrix spike/matrix spike duplicates (MS/MSDs) including:

- a) Samples associated with the MS/MSD clearly identified,
- b) MS/MSD spiking amounts,
- c) Concentration of each MS/MSD analyte measured in the parent and spiked samples,
- d) Calculated %R and relative percent differences (RPDs), and
- e) The laboratory's MS/MSD QC limits

R8 Laboratory analytical duplicate (if applicable) recovery and precision:

- a) the amount of analyte measured in the duplicate,
- b) the calculated RPD, and
- c) the laboratory's QC limits for analytical duplicates.

R9 List of method quantitation limits (MQLs) for each analyte for each method and matrix;

R10 Other problems or anomalies.

The exception Report for every "No" or "Not Reviewed (NR)" item in laboratory review checklist.

Release statement: I am responsible for the release of this laboratory data package. This data package has been reviewed by the laboratory and is complete and technically compliant with the requirements of the methods used, except where noted by the laboratory in the attached exceptions reports. By my signature below, I affirm to the best of my knowledge, all problems/anomalies, observed by the laboratory as having the potential to affect the quality of the data, have been identified by the laboratory in the Laboratory Review Checklist, and no information or data have been knowingly withheld that would affect the quality of the data.

Check, If applicable: ☐ This laboratory is an in-house laboratory controlled by the person responding to rule. The official signing the cover page of the rule-required report (for example, the APAR) in which these data are used is responsible for releasing this data package and is by signature affirming the above release statement is true.

ERIC C. LAWSON



April 1, 2009

Name (Printed)

Signature

Official Title (printed)

DATE

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name: Microbac Laboratories Inc.
 Laboratory Log Number: L09030671
 Project Name: 798-LONGHORN
 Method: 9056
 Prep Batch Number(s): WG298726
 Reviewer Name: ERIC C. LAWSON
 LRC Date: March 31, 2009

Description	Yes	No	NA(1)	NR(2)	ER(3)
Chain-Of-Custody (C-O-C)					
Did samples meet the laboratory's standard conditions of sample acceptability upon receipt?	✓				
Were all departures from standard conditions described in an exception report?	✓				
Sample and quality control (QC) identification					
Are all field sample ID numbers cross-referenced to the laboratory ID numbers?	✓				
Are all laboratory ID numbers cross-referenced to the corresponding QC data?	✓				
Test reports					
Were all samples prepared and analyzed within holding times?	✓				
Other than those results <MQL, were all other raw values bracketed by calibration standards?	✓				
Were calculations checked by a peer or supervisor?	✓				
Were all analyte identifications checked by a peer or supervisor?	✓				
Were sample quantitation limits reported for all analytes not detected?	✓				
Were all results for soil and sediment samples reported on a dry weight basis?			✓		
Were % moisture (or solids) reported for all soil and sediment samples?			✓		
If required for the project, TICs reported?	✓				
Surrogate recovery data					
Were surrogates added prior to extraction?			✓		
Were surrogate percent recoveries in all samples within the laboratory QC limits?			✓		
Test reports/summary forms for blank samples					
Were appropriate type(s) of blanks analyzed?	✓				
Were blanks analyzed at the appropriate frequency?	✓				
Were method blanks taken through the entire analytical process, including preparation and, if applicable, cleanup procedures?	✓				
Were blank concentrations <MQL?	✓				
Laboratory control samples (LCS):					
Were all COCs included in the LCS?	✓				
Was each LCS taken through the entire analytical procedure, including prep and cleanup steps?	✓				
Were LCSs analyzed at the required frequency?	✓				
Were LCS (and LCSD, if applicable) %Rs within the laboratory QC limits?	✓				
Does the detectability data document the laboratory's capability to detect the COCs at the MDL used to calculate the SQLs?	✓				
Was the LCSD RPD within QC limits?			✓		
Matrix spike (MS) and matrix spike duplicate (MSD) data					
Were the project/method specified analytes included in the MS and MSD?	✓				
Were MS/MSD analyzed at the appropriate frequency?	✓				
Were MS (and MSD, if applicable) %Rs within the laboratory QC limits?	✓				

Description	Yes	No	NA(1)	NA(2)	ER(3)
Were MS/MSD RPDs within laboratory QC limits?	✓				
Analytical duplicate data					
Were appropriate analytical duplicates analyzed for each matrix?	✓				
Were analytical duplicates analyzed at the appropriate frequency?	✓				
Were RPDs or relative standard deviations within the laboratory QC limits?	✓				
Method quantitation limits (MQLs):					
Are the MQLs for each method analyte included in the laboratory data package?	✓				
Do the MQLs correspond to the concentration of the lowest non-zero calibration standard?	✓				
Are unadjusted MQLs included in the laboratory data package?	✓				
Other problems/anomalies					
Are all known problems/anomalies/special conditions noted in this LRC and ER?	✓				
Were all necessary corrective actions performed for the reported data?	✓				
Was applicable and available technology used to lower the SQL minimize the matrix interference affects on the sample results?	✓				
Were response factors and/or relative response factors for each analyte within QC limits?	✓				
Were percent RSDs or correlation coefficient criteria met?	✓				
Was the number of standards recommended in the method used for all analytes?	✓				
Were all points generated between the lowest and highest standard used to calculate the curve?	✓				
Are ICAL data available for all instruments used?	✓				
Has the initial calibration curve been verified using an appropriate second source standard?	✓				
Initial and continuing calibration verification (ICV and CCV) and continuing calibration blank (CCB):					
Was the CCV analyzed at the method-required frequency?	✓				
Were percent differences for each analyte within the method-required QC limits?	✓				
Was the ICAL curve verified for each analyte?	✓				
Was the absolute value of the analyte concentration in the inorganic CCB <MDL?	✓				
Mass spectral tuning:					
Was the appropriate compound for the method used for tuning?			✓		
Were ion abundance data within the method-required QC limits?			✓		
Internal standards (IS):					
Were IS area counts and retention times within the method-required QC limits?			✓		
Raw data (NELAC section 1 appendix A glossary, and section 5.12 or ISO/IEC 17025 section 4.12.2)					
Were the raw data (for example, chromatograms, spectral data) reviewed by an analyst?	✓				
Were data associated with manual integrations flagged on the raw data?	✓				
Dual column confirmation					
Did dual column confirmation results meet the method-required QC?			✓		
Tentatively identified compounds (TICs):					
If TICs were requested, were the mass spectra and TIC data subject to appropriate checks?			✓		
Interference Check Sample (ICS) results:					
Were percent recoveries within method QC limits?			✓		
Serial dilutions, post digestion spikes, and method of standard additions					
Were percent differences, recoveries, and the linearity within the QC limits specified in the method?			✓		
Method detection limit (MDL) studies					
Was a MDL study performed for each reported analyte?	✓				
Is the MDL either adjusted or supported by the analysis of DCSs?	✓				
Proficiency test reports:					
Was the laboratory's performance acceptable on the applicable proficiency tests or evaluation studies?	✓				

Description	Yes	No	NA(1)	NA(2)	NA(3)
Standards documentation					
Are all standards used in the analyses NIST-traceable or obtained from other appropriate sources?	✓				
Compound/analyte identification procedures					
Are the procedures for compound/analyte identification documented?	✓				
Demonstration of analyst competency (DOC)					
Was DOC conducted consistent with NELAC Chapter 5C or ISO/IEC 4?	✓				
Is documentation of the analyst's competency up-to-date and on file?	✓				
Verification/validation documentation for methods (NELAC Chap 5 or ISO/IEC 17025 Section 5)					
Are all the methods used to generate the data documented, verified, and validated, where applicable?	✓				
Laboratory standard operating procedures (SOPs):					
Are laboratory SOPs current and on file for each method performed?	✓				

Microbac Laboratories Inc.
Laboratory Review Checklist

Laboratory Name:	Microbac Laboratories Inc.
Laboratory Log Number:	L09030671
Project Name:	798-LONGHORN
Method:	9056
Prep Batch Number(s):	WG298726
Reviewer Name:	ERIC C. LAWSON
LRC Date:	March 31, 2009

EXCEPTIONS REPORT

ER# - Description

- (1) NA = Not applicable to method or project
- (2) NR = Not reviewed
- (3) ER# = Exception report number

2.1 Volatiles Data

2.1.1 Volatiles GCMS Data (8260)

2.1.1.1 Summary Data

LABORATORY REPORT

00087818

L09030671

04/06/09 15:34

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025

Project: Longhorn AAP

Site: LHAAP-16

P.O. Number: 389869/ 390836 (GWTP)

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
16WW36-033009	L09030671-01	8260B	500	31-MAR-09
16WW28-033009	L09030671-02	8260B	1	31-MAR-09



Sample Number: **L09030671-01**
 Client ID: **16WW36-033009**
 Matrix: **Water**
 Workgroup Number: **WG298625**
 Collect Date: **03/30/2009 08:00**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **500**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/31/2009 21:23**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/31/2009 21:23**
 File ID: **10M71479**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	5000	1250
Benzene	71-43-2		U	500	62.5
Bromobenzene	108-86-1		U	500	62.5
Bromochloromethane	74-97-5		U	500	100
Bromodichloromethane	75-27-4		U	500	125
Bromoform	75-25-2		U	500	250
Bromomethane	74-83-9		U	500	250
2-Butanone	78-93-3		U	5000	1250
n-Butylbenzene	104-51-8		U	500	125
sec-Butylbenzene	135-98-8		U	500	125
tert-Butylbenzene	98-06-6		U	500	125
Carbon disulfide	75-15-0		U	500	250
Carbon tetrachloride	56-23-5		U	500	125
Chlorobenzene	108-90-7		U	500	62.5
Chlorodibromomethane	124-48-1		U	500	125
Chloroethane	75-00-3		U	500	250
2-Chloroethyl vinyl ether	110-75-8		U	5000	1000
Chloroform	67-66-3		U	500	62.5
Chloromethane	74-87-3		U	500	125
2-Chlorotoluene	95-49-8		U	500	62.5
4-Chlorotoluene	106-43-4		U	500	125
1,2-Dibromo-3-chloropropane	96-12-8		U	2500	500
1,2-Dibromoethane	106-93-4		U	500	125
Dibromomethane	74-95-3		U	500	125
1,2-Dichlorobenzene	95-50-1		U	500	62.5
1,3-Dichlorobenzene	541-73-1		U	500	125
1,4-Dichlorobenzene	106-46-7		U	500	62.5
Dichlorodifluoromethane	75-71-8		U	500	125
1,1-Dichloroethane	75-34-3		U	500	62.5
1,2-Dichloroethane	107-06-2		U	500	125
1,1-Dichloroethene	75-35-4		U	500	250
cis-1,2-Dichloroethene	156-59-2	51800		500	125
trans-1,2-Dichloroethene	156-60-5	1660		500	125
1,2-Dichloropropane	78-87-5		U	500	100
1,3-Dichloropropane	142-28-9		U	500	100
2,2-Dichloropropane	594-20-7		U	500	125
cis-1,3-Dichloropropene	10061-01-5		U	500	125
trans-1,3-Dichloropropene	10061-02-6		U	500	250
1,1-Dichloropropene	563-58-6		U	500	125
Ethylbenzene	100-41-4		U	500	125
2-Hexanone	591-78-6		U	5000	1250
Hexachlorobutadiene	87-68-3		U	500	125
Isopropylbenzene	98-82-8		U	500	125
p-Isopropyltoluene	99-87-6		U	500	125
4-Methyl-2-pentanone	108-10-1		U	5000	1250
Methylene chloride	75-09-2		U	2500	125
Naphthalene	91-20-3		U	500	100
n-Propylbenzene	103-65-1		U	500	62.5
Styrene	100-42-5		U	500	62.5
1,1,1,2-Tetrachloroethane	630-20-6		U	500	125
1,1,2,2-Tetrachloroethane	79-34-5		U	500	62.5
Tetrachloroethene	127-18-4		U	500	125
Toluene	108-88-3		U	500	125
1,2,3-Trichlorobenzene	87-61-6		U	500	75.0
1,2,4-Trichlorobenzene	120-82-1		U	500	100
1,1,1-Trichloroethane	71-55-6		U	500	125
1,1,2-Trichloroethane	79-00-5		U	500	125
Trichloroethene	79-01-6	29300		500	125
Trichlorofluoromethane	75-69-4		U	500	125

1 of 4



Report Number: **L09030671**Report Date : **April 6, 2009**

00087820

Sample Number: **L09030671-01**
 Client ID: **16WW36-033009**
 Matrix: **Water**
 Workgroup Number: **WG298625**
 Collect Date: **03/30/2009 08:00**
 Sample Tag: **DL01**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **TMB**
 Dilution: **500**
 Units: **ug/L**

Instrument: **HPMS10**
 Prep Date: **03/31/2009 21:23**
 Cal Date: **03/18/2009 15:23**
 Run Date: **03/31/2009 21:23**
 File ID: **10M71479**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	500	250
1,2,4-Trimethylbenzene	95-63-6		U	500	125
1,3,5-Trimethylbenzene	108-67-8		U	500	125
Vinyl acetate	108-05-4		U	5000	1250
Vinyl chloride	75-01-4	1700		500	125
o-Xylene	95-47-6		U	500	125
m-,p-Xylene	136777-61-2		U	500	250
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	111	86	118		
1,2-Dichloroethane-d4	114	80	120		
Toluene-d8	114	88	110	*	
4-Bromofluorobenzene	91.2	86	115		

U Not detected at or above adjusted sample detection limit

* Surrogate or spike compound out of range

Sample Number: **L09030671-02**
 Client ID: **16WW28-033009**
 Matrix: **Water**
 Workgroup Number: **WG298812**
 Collect Date: **03/30/2009 16:20**
 Sample Tag: **02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **FJB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS6**
 Prep Date: **04/01/2009 19:53**
 Cal Date: **03/19/2009 14:09**
 Run Date: **04/01/2009 19:53**
 File ID: **6M82576**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Acetone	67-64-1		U	10.0	2.50
Benzene	71-43-2		U	1.00	0.125
Bromobenzene	108-86-1		U	1.00	0.125
Bromochloromethane	74-97-5		U	1.00	0.200
Bromodichloromethane	75-27-4		U	1.00	0.250
Bromoform	75-25-2		U	1.00	0.500
Bromomethane	74-83-9		U	1.00	0.500
2-Butanone	78-93-3		U	10.0	2.50
n-Butylbenzene	104-51-8		U	1.00	0.250
sec-Butylbenzene	135-98-8		U	1.00	0.250
tert-Butylbenzene	98-06-6		U	1.00	0.250
Carbon disulfide	75-15-0		U	1.00	0.500
Carbon tetrachloride	56-23-5		U	1.00	0.250
Chlorobenzene	108-90-7		U	1.00	0.125
Chlorodibromomethane	124-48-1		U	1.00	0.250
Chloroethane	75-00-3		U	1.00	0.500
2-Chloroethyl vinyl ether	110-75-8		U	10.0	2.00
Chloroform	67-66-3		U	1.00	0.125
Chloromethane	74-87-3	0.313	J	1.00	0.250
2-Chlorotoluene	95-49-8		U	1.00	0.125
4-Chlorotoluene	106-43-4		U	1.00	0.250
1,2-Dibromo-3-chloropropane	96-12-8		U	5.00	1.00
1,2-Dibromoethane	106-93-4		U	1.00	0.250
Dibromomethane	74-95-3		U	1.00	0.250
1,2-Dichlorobenzene	95-50-1		U	1.00	0.125
1,3-Dichlorobenzene	541-73-1		U	1.00	0.250
1,4-Dichlorobenzene	106-46-7		U	1.00	0.125
Dichlorodifluoromethane	75-71-8		U	1.00	0.250
1,1-Dichloroethane	75-34-3		U	1.00	0.125
1,2-Dichloroethane	107-06-2		U	1.00	0.250
1,1-Dichloroethene	75-35-4		U	1.00	0.500
cis-1,2-Dichloroethene	156-59-2	78.0		1.00	0.250
trans-1,2-Dichloroethene	156-60-5		U	1.00	0.250
1,2-Dichloropropane	78-87-5		U	1.00	0.200
1,3-Dichloropropane	142-28-9		U	1.00	0.200
2,2-Dichloropropane	594-20-7		U	1.00	0.250
cis-1,3-Dichloropropene	10061-01-5		U	1.00	0.250
trans-1,3-Dichloropropene	10061-02-6		U	1.00	0.500
1,1-Dichloropropene	563-58-6		U	1.00	0.250
Ethylbenzene	100-41-4		U	1.00	0.250
2-Hexanone	591-78-6		U	10.0	2.50
Hexachlorobutadiene	87-68-3		U	1.00	0.250
Isopropylbenzene	98-82-8		U	1.00	0.250
p-Isopropyltoluene	99-87-6		U	1.00	0.250
4-Methyl-2-pentanone	108-10-1		U	10.0	2.50
Methylene chloride	75-09-2		U	5.00	0.250
Naphthalene	91-20-3		U	1.00	0.200
n-Propylbenzene	103-65-1		U	1.00	0.125
Styrene	100-42-5		U	1.00	0.125
1,1,1,2-Tetrachloroethane	630-20-6		U	1.00	0.250
1,1,2,2-Tetrachloroethane	79-34-5		U	1.00	0.125
Tetrachloroethene	127-18-4		U	1.00	0.250
Toluene	108-88-3		U	1.00	0.250
1,2,3-Trichlorobenzene	87-61-6		U	1.00	0.150
1,2,4-Trichlorobenzene	120-82-1		U	1.00	0.200
1,1,1-Trichloroethane	71-55-6		U	1.00	0.250
1,1,2-Trichloroethane	79-00-5		U	1.00	0.250
Trichloroethene	79-01-6	46.0		1.00	0.250
Trichlorofluoromethane	75-69-4		U	1.00	0.250

3 of 4



Report Number: **L09030671**Report Date : **April 6, 2009**

00087822

Sample Number: **L09030671-02**
 Client ID: **16WW28-033009**
 Matrix: **Water**
 Workgroup Number: **WG298812**
 Collect Date: **03/30/2009 16:20**
 Sample Tag: **02**

PrePrep Method: **NONE**
 Prep Method: **5030B**
 Analytical Method: **8260B**
 Analyst: **FJB**
 Dilution: **1**
 Units: **ug/L**

Instrument: **HPMS6**
 Prep Date: **04/01/2009 19:53**
 Cal Date: **03/19/2009 14:09**
 Run Date: **04/01/2009 19:53**
 File ID: **6M82576**

Analyte	CAS. Number	Result	Qual	PQL	SDL
1,2,3-Trichloropropane	96-18-4		U	1.00	0.500
1,2,4-Trimethylbenzene	95-63-6		U	1.00	0.250
1,3,5-Trimethylbenzene	108-67-8		U	1.00	0.250
Vinyl acetate	108-05-4		U	10.0	2.50
Vinyl chloride	75-01-4	2.09		1.00	0.250
o-Xylene	95-47-6		U	1.00	0.250
m-,p-Xylene	136777-61-2		U	1.00	0.500
Surrogate	% Recovery	Lower	Upper	Qual	
Dibromofluoromethane	103	86	118		
1,2-Dichloroethane-d4	101	80	120		
Toluene-d8	95.2	88	110		
4-Bromofluorobenzene	97.4	86	115		

U Not detected at or above adjusted sample detection limit

J The analyte was positively identified, but the quantitation was below the RL

2.1.1.2 QC Summary Data

Example 8260 Calculations

1.0 Calculating the Response Factor (RF) from the initial calibration (ICAL) data:

$$RF = [(Ax) (Cis)] / [(Ais) (Cx)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured:	3399156
Cis = Concentration of the specific internal standard (ug/mL)	25
Ais = Area of the characteristic ion of the specific internal standard	846471
Cx = Concentration of the compound in the standard being measured (ug/mL)	100

RF = Calculated Response Factor **1.0039**

2.0 Calculating the concentration (C) of a compound in water using the average RF: *

$$Cx = [(Ax) (Cis) (Vn)(D)] / [(Ais) (RF) (Vs)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Vs = Purge volume of sample (mL)	10
Vn = Nominal purge volume of sample (mL) (10.0 mL)	10
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

3.0 Calculating the concentration (C) of a compound in soil using the average RF: *

$$Cx = [(Ax) (Cis) (Wn)(D)] / [(Ais) (RF) (Ws)]$$

Example

where:

Ax = Area of the characteristic ion for the compound being measured	3122498
Cis = Concentration of the specific internal standard (ug/L)	25
D = Dilution factor for sample as a multiplier (10x = 10)	1
Ais = Area of the characteristic ion of the specific internal standard	611048
RF = Average RF from the ICAL	1.004
Ws = Weight of sample purged (g)	5
Wn = Nominal purge weight (g) (5.0 g)	5
Cx = Concentration of the compound in the sample being measured (ug/L)	127.2428

Dry weight correction:

Percent solids (PCT_S)	50
Cd = (Cx) (100)/PCT_S	254.4856

* Concentrations appearing on the instrument quantitation reports are on-column results and do not take into account initial volume, final volume, and the dilution factor.

4.0 Concentration from Linear Regression

Step 1: Retrieve Curve Data From Plot, $y = mx + b$

y = response ratio = response of analyte / response of IS = Ax/Ais

x = amount ratio = concentration analyte/concentration internal standard = Cx / Cis

m = slope from curve = 0.213

b = intercept from curve = - 0.00642

Step 2: Calculate y from Quantitation Report

$$y = 86550/593147 = 0.1459$$

Step 3: Solve for x

$$x = (y - b)/m = [(0.1459 - (-0.00642))/0.213] = 0.7152$$

Step 4: Solve for analyte concentration Cx

$$Cx = Cis (x) = (25.0)(0.7152) = 17.88$$

Example Spreadsheet Calculation:

Slope from curve, m:	0.213
Intercept from curve, b:	-0.00642
Area of analyte, Ax:	86550
Area of Internal Standard, Ais:	593147
Concentration of IS, Cis	25.00
Response Ratio:	0.145917
Amount Ratio:	0.715195
Concentration:	17.87988
Units of Internal Standard:	ug/L

5.0 Concentration from Quadratic Regression**Step 1 - Retrieve Curve Data from Plot, $y = Ax^2 + Bx + C$**

Where:

$$Ax^2 + Bx + (C - y) = 0$$

A, B, C = constants from the ICAL quadratic regression

y = Response ratio = Area of analyte/Area of internal standard (IS)

x = Amount ratio = Concentration of analyte/concentration of IS

Step 2: Calculate y from Quantitation Report

$$y = Ax/Ais$$

Step 3: Solve for x using the quadratic formula

$$Ax^2 + Bx + C - y = 0$$

$$x = \frac{b \pm \sqrt{b^2 - 4a(c - y)}}{2a} \quad (\text{Two possible solutions})$$

Step 4: Solve for analyte concentration Cx

$$Cx = (Cis)(\text{Amount ratio})$$

Example Spreadsheet Calculation:

Value of A from plot:	-0.00629
Value of B from plot:	0.511
Value of C from plot:	-0.0276
Area of unknown from quantitation report:	293821
Area of IS from quantitation report:	784848
Response ratio, y:	0.374367
C - y:	-0.40197
Root 1 - Computed amount ratio, X1:	80.44567
Root 2 - Computed amount ratio, X2:	0.794396 use this solution
Concentration of IS, Cis:	25.00
Concentration of analyte, Cx:	19.86 ug/L

Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031809
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28031

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297559

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71171	SYSTEM BLANK	NA	1	1		03/18/09 07:43
2	10M71172	SYSTEM BLANK	NA	1	1		03/18/09 08:17
3	10M71173	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 08:47
4	10M71174	WG297559-01 50ng BFB STD 8260	NA	1	1	STD31709	03/18/09 09:00
5	10M71175	WG297559-02 0.3ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:26
6	10M71176	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 09:58
7	10M71177	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 10:31
8	10M71178	WG297559-03 0.4ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:03
9	10M71179	WG297559-04 1ug/L STD 8260	NA	1	1	STD31848	03/18/09 11:36
10	10M71180	WG297559-05 2ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:08
11	10M71181	WG297559-06 5ug/L STD 8260	NA	1	1	STD31848	03/18/09 12:40
12	10M71182	WG297559-07 20ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:13
13	10M71183	WG297559-08 50ug/L STD 8260	NA	1	1	STD31848	03/18/09 13:45
14	10M71184	WG297559-09 100ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:17
15	10M71185	WG297559-10 200ug/L STD 8260	NA	1	1	STD31848	03/18/09 14:50
16	10M71186	WG297559-11 300ug/L STD 8260	NA	1	1	STD31848	03/18/09 15:23
17	10M71187	SYSTEM BLANK	NA	1	1		03/18/09 15:55
18	10M71188	SYSTEM BLANK	NA	1	1		03/18/09 16:27
19	10M71189	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/18/09 16:58
20	10M71190	SYSTEM BLANK	NA	1	1		03/18/09 17:30

Comments

Seq.	Rerun	Dil.	Reason	Analytes
3	X			
File ID: 10M71173				
Tune failed. DNR.				
6	X			
File ID: 10M71176				
No secondary for 123-TCB. DNR.				
9	X			
File ID: 10M71179				
Idomethane didn't show up at all. DNR.				

Approved:



Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS6 Dataset: 031909
 Analyst1: MES Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 624 SOP: MSV10 Rev: 7
 Method: 5030/5035 SOP: PAT01 Rev: 11
 Maintenance Log ID: 27140

Internal Standard: STD31689 Surrogate Standard: STD31866
 CCV: STD31874 LCS: STD31848 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297666

Comments: Not reporting second tune-archon errored.

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	6M82294	BLANK	NA	1	1		03/19/09 07:38
2	6M82295	WG297666-01 50NG BFB STD 8260	NA	1	1	STD31709	03/19/09 08:08
3	6M82296	WG297666-02 0.3ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 08:39
4	6M82297	WG297666-03 0.4ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 09:12
5	6M82298	WG297666-04 1 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 09:44
6	6M82299	WG297666-05 2 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 10:53
7	6M82300	WG297666-06 5 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 11:25
8	6M82301	WG297666-07 20 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 12:01
9	6M82302	WG297666-08 50 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 12:33
10	6M82303	WG297666-09 100 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 13:05
11	6M82304	WG297666-10 200 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 13:37
12	6M82305	WG297666-11 300 ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 14:09
13	6M82306	SYSTEM BLANK	NA	1	1		03/19/09 14:44
14	6M82307	WG297666-12 20ug/L ALT SOURCE	NA	1	1	STD31848	03/19/09 15:21
15	6M82308	WG297666-13 100ug/L ALT SOURCE	NA	1	1	STD31848	03/19/09 15:54
16	6M82309	WG297666-12 20ug/L ALT SOURCE	NA	1	1	STD31848	03/19/09 16:26
17	6M82310	WG297778-01 50NG BFB STD 8260	NA	1	1	STD31709	03/19/09 16:54
18	6M82311	WG297778-02 50ug/L WATER STD 8260	NA	1	1	STD31874	03/19/09 17:20
19	6M82312	WG297779-01 VBLK0319 BLANK 8260	NA	1	1		03/19/09 17:52
20	6M82313	WG297779-01 VBLK0319 BLANK 8260	NA	1	1		03/19/09 18:24
21	6M82314	WG297779-02 20ug/L LCS 8260	NA	1	1	STD31848	03/19/09 18:57
22	6M82315	L09030327-16 A 826-SPE	NA	1	1		03/19/09 19:29
23	6M82316	L09030424-08 A 826-A9	NA	1	1		03/19/09 20:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes
14				
File ID: 6M82307				
RR for SS.				

Approved: March 20, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71192	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 12:01
2	10M71193	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 12:27
3	10M71194	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 13:04
4	10M71195	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 13:36
5	10M71196	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 14:04
6	10M71197	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 14:28
7	10M71198	WG297549-01 50ng BFB STD 8260	NA	1	1	STD31709	03/19/09 15:01
8	10M71199	WG297549-02 50ug/L CCV STD 8260	NA	1	1	STD31848	03/19/09 15:25
9	10M71200	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 15:57
10	10M71201	WG297551-01 VBLK0319 BLANK STD 826	NA	1	1		03/19/09 16:33
11	10M71202	WG297559-12 20ug/L ALT SRC STD 8260	NA	1	1	STD31819	03/19/09 17:05
12	10M71203	WG297551-02 20ug/L LCS STD 8260	NA	1	1	STD31819	03/19/09 17:38
13	10M71204	L09030379-13 A 826-SPE	<2	1	1		03/19/09 18:10
14	10M71205	L09030379-01 A 826-SPE	4	1	1		03/19/09 18:42
15	10M71206	L09030379-02 A 826-SPE	5	1	1		03/19/09 19:15
16	10M71207	L09030379-03 A 826-SPE	<2	1	1		03/19/09 19:47
17	10M71208	L09030379-04 A 826-SPE	5	1	1		03/19/09 20:19
18	10M71209	L09030379-05 A 826-SPE	<2	1	1		03/19/09 20:52
19	10M71210	L09030379-06 A 826-SPE	4	1	1		03/19/09 21:24
20	10M71211	L09030379-07 A 826-SPE	5	1	1		03/19/09 21:56
21	10M71212	L09030379-08 A 826-SPE	4	1	1		03/19/09 22:29
22	10M71213	L09030379-09 A MS 826-SPE	3	1	1	STD31819	03/19/09 23:01
23	10M71214	L09030379-10 A MSD 826-SPE	3	1	1	STD31819	03/19/09 23:33
24	10M71215	L09030379-11 A 826-SPE	4	1	1		03/20/09 00:05
25	10M71216	L09030379-12 A 2X 826-SPE	5	1	2		03/20/09 00:38
26	10M71217	L09030379-14 A 826-SPE	7	1	1		03/20/09 01:10
27	10M71218	L09030379-15 A 826-SPE	7	1	1		03/20/09 01:43
28	10M71219	L09030379-16 A 826-SPE	<2	1	1		03/20/09 02:15
29	10M71220	L09030379-17 A 826-SPE	7	1	1		03/20/09 02:48
30	10M71221	SYSTEM BLANK	NA	1	1		03/20/09 03:21
31	10M71222	SYSTEM BLANK	NA	1	1		03/20/09 03:53

Comments

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
2	X		Over Linear Range	VC
File ID: 10M71193				
VC was low. DNR.				
3	X		Over Linear Range	
File ID: 10M71194				
VC was low. DNR.				
4	X	1	Carry-over contamination	
File ID: 10M71195				
DNR.				
6	X		Over Linear Range	
File ID: 10M71197				
VC was low. DNR.				
9	X	1	Carry-over contamination	
File ID: 10M71200				
DNR.				
14	X	5	Over Calibration Range	2-BUT
File ID: 10M71205				
15	X	10	Over Calibration Range	2-BUT
File ID: 10M71206				
16	X	10	Over Calibration Range	2-BUT
File ID: 10M71207				
17	X	50	Over Calibration Range	2-BUT
File ID: 10M71208				
18	X	1	Carry-over contamination	
File ID: 10M71209				
DNR.				
19	X	10	Over Calibration Range	2-BUT
File ID: 10M71210				
20	X	10	Over Calibration Range	2-BUT
File ID: 10M71211				

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 031909
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28059

Internal Standard: STD31494 Surrogate Standard: STD31691
 CCV: STD31848 LCS: STD31819 MS/MSD: STD31819
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG297551

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
21	X	10	Over Calibration Range	2-BUT
File ID: 10M71212				
24	X	5	Over Calibration Range	2-BUT
File ID: 10M71215				
25	X	10	Over Calibration Range	2-BUT
File ID: 10M71216				
26	X	10	Over Calibration Range	2-BUT
File ID: 10M71217				
27	X	1	Carry-over contamination	
File ID: 10M71218				
DNR.				
28	X	1	Surrogate standard failure	
File ID: 10M71219				
DNR.				
29	X	10	Over Calibration Range	2-BUT
File ID: 10M71220				

Approved: March 23, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 033109
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28179

Internal Standard: STD31969 Surrogate Standard: STD32024
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298625

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
1	10M71453	SYSTEM BLANK	NA	1	1		03/31/09 07:54
2	10M71454	SYSTEM BLANK	NA	1	1		03/31/09 08:32
3	10M71455	WG298624-01 50ng BFB STD 8260	NA	1	1	STD31709	03/31/09 09:01
4	10M71456	WG298624-02 50ug/L CCV STD 8260	NA	1	1	STD32008	03/31/09 09:25
5	10M71457	WG298625-01 VBLK0331 BLANK STD 826	NA	1	1		03/31/09 09:58
6	10M71458	WG298624-01 50ng BFB STD 8260	NA	1	1	STD31709	03/31/09 10:30
7	10M71459	WG298624-01 50ng BFB STD 8260	NA	1	1	STD31709	03/31/09 10:44
8	10M71460	WG298624-02 50ug/L CCV STD 8260	NA	1	1	STD32008	03/31/09 11:08
9	10M71461	WG298625-01 VBLK0331 BLANK STD 826	NA	1	1		03/31/09 11:41
10	10M71462	WG298625-01 VBLK0331 BLANK STD 826	NA	1	1		03/31/09 12:13
11	10M71463	WG298625-02 20ug/L LCS STD 8260	NA	1	1	STD31951	03/31/09 12:46
12	10M71464	WG298625-03 20ug/L LCSDUP STD 8260	NA	1	1	STD31951	03/31/09 13:18
13	10M71465	L09030649-11 B 1000X D1 826-LOW	<2	1	1000		03/31/09 13:50
14	10M71466	L09030649-10 B 50X 826-LOW 00	<2	1	50		03/31/09 14:23
15	10M71467	L09030649-14 B 50X 826-LOW 00	<2	1	50		03/31/09 14:55
16	10M71468	L09030649-12 B 1000X 826-LOW D1	<2	1	1000		03/31/09 15:27
17	10M71469	L09030649-13 B 1000X 826-LOW D1	<2	1	1000		03/31/09 16:00
18	10M71470	L09030659-01 B 20X 826-SPE D1	<2	1	20		03/31/09 16:32
19	10M71471	L09030643-02 A 826-SPE	<2	1	1		03/31/09 17:04
20	10M71472	L09030661-01 A 826-BETX	<2	1	1		03/31/09 17:37
21	10M71473	L09030557-09 A 826-SPLP	<2	18	1		03/31/09 18:09
22	10M71474	L09030643-04 A 826-SPLP	<2	18	1		03/31/09 18:41
23	10M71475	L09030643-06 A 826-SPLP	<2	18	1		03/31/09 19:14
24	10M71476	L09030594-06 A 826-SPLP	<2	18	1		03/31/09 19:46
25	10M71477	L09030594-03 A 826-SPLP	7	18	1		03/31/09 20:18
26	10M71478	L09030652-02 A 826-BETX	7	1	1		03/31/09 20:50
27	10M71479	L09030671-01 A 500X 826-LOW	<2	1	500		03/31/09 21:23
28	10M71480	L09030671-02 A 100X 826-LOW	<2	1	100		03/31/09 21:55
29	10M71481	L09030597-02 A 1000X 826-TC	<2	17	1000		03/31/09 22:27
30	10M71482	SYSTEM BLANK	NA	1	1		03/31/09 23:00
31	10M71483	SYSTEM BLANK	NA	1	1		03/31/09 23:32

Comments

Approved: April 01, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS10 Dataset: 033109
 Analyst1: TMB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 5030B/5035 SOP: PAT01 Rev: 11

Maintenance Log ID: 28179

Internal Standard: STD31969 Surrogate Standard: STD32024
 CCV: STD32008 LCS: STD31951 MS/MSD: NA
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298625

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
4	X			EB
File ID: 10M71456				
EB was high. DNR.				
5	X	1	Carry-over contamination	
File ID: 10M71457				
dnr.				
6	X			
File ID: 10M71458				
Tune failed. DNR.				
9	X	1	Carry-over contamination	
File ID: 10M71461				
DNR.				
15	X	200	Over Calibration Range	tce
File ID: 10M71467				
25	X	1	Surrogate standard failure	
File ID: 10M71477				
28	X	1	Analyzed too dilute	
File ID: 10M71480				
DNR.				
29	X	10	Analyzed too dilute	
File ID: 10M71481				
DNR.				

Approved: April 01, 2009

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Microbac Laboratories Inc.

Instrument Run Log

Instrument: HPMS6 Dataset: 040109
 Analyst1: FJB Analyst2: NA
 Method: 8260B SOP: MSV01 Rev: 12
 Method: 624 SOP: MSV10 Rev: 7
 Method: 5030/5035 SOP: PAT01 Rev: 11
 Maintenance Log ID: 28240

Internal Standard: STD31689 Surrogate Standard: STD31866
 CCV: STD31950 LCS: STD31951 MS/MSD: STD31951
 Column 1 ID: RTX502.2 Column 2 ID: NA
 Workgroups: WG298812

Comments:

Seq.	File ID	Sample Information	pH	Mat	Dil	Reference	Date/Time
29	6M82568	WG298811-01 BFB 50ng STD 8260	NA	1	1	STD31709	04/01/09 15:56
30	6M82569	WG298811-01 BFB 50ng STD 8260	NA	1	1	STD31709	04/01/09 16:14
1	6M82570	WG298811-01 BFB 50ng STD 8260	NA	1	1	STD31709	04/01/09 16:46
2	6M82571	WG298811-02 50ug/L STD 8260	NA	1	1	STD31950	04/01/09 17:10
3	6M82572	WG298812-01 VBLK0401 BLANK 8260	NA	1	1		04/01/09 17:42
4	6M82573	WG298812-01 VBLK0401 BLANK 8260	NA	1	1		04/01/09 18:15
5	6M82574	WG298812-02 20ug/L LCS STD 8260	NA	1	1	STD31951	04/01/09 18:47
6	6M82575	L09030645-01 A 826-SPE	<2	1	1		04/01/09 19:20
7	6M82576	L09030671-02 C 826-LOW	<2	1	1		04/01/09 19:53
8	6M82577	L09030686-01 100X A 826-LOW	<2	1	100		04/01/09 20:26
9	6M82578	L09030686-02 100X A 826-LOW	<2	1	100		04/01/09 20:59
10	6M82579	L09030616-01 A 826-LOW	<2	1	1		04/01/09 21:31
11	6M82580	L09030645-02 A 826-SPE	<2	1	1		04/01/09 22:04
12	6M82581	L09030645-03 REF A 826-SPE	<2	1	1		04/01/09 22:38
13	6M82582	L09030645-04 MS A 826-SPE	<2	1	1	STD31951	04/01/09 23:12
14	6M82583	L09030645-05 MSD A 826-SPE	<2	1	1	STD31951	04/01/09 23:45
15	6M82584	L09030645-06 A 826-SPE	<2	1	1		04/02/09 00:22
16	6M82585	L09030645-07 A 826-SPE	<2	1	1		04/02/09 00:57
17	6M82586	L09030645-08 A 826-SPE	<2	1	1		04/02/09 01:30
18	6M82587	L09030645-09 A 826-SPE	<2	1	1		04/02/09 02:02
19	6M82588	L09030645-10 A 826-SPE	<2	1	1		04/02/09 02:35
20	6M82589	L09030645-11 A 826-SPE	<2	1	1		04/02/09 03:09
21	6M82590	L09030645-12 A 826-SPE	<2	1	1		04/02/09 03:45
22	6M82591	L09030645-13 A 826-SPE	<2	1	1		04/02/09 04:22
23	6M82592	L09030645-14 A 826-SPE	<2	1	1		04/02/09 04:56
24	6M82593	SYSTEM BLANK	NA	1	1		04/02/09 05:29
25	6M82594	WG298812-06 624 BLANK	NA	1	1		04/02/09 06:02
26	6M82595	L09030684-08 A 624-SPE	7	2	1		04/02/09 06:34
27	6M82596	SYSTEM BLANK	NA	1	1		04/02/09 07:07
28	6M82597	SYSTEM BLANK	NA	1	1		04/02/09 07:39

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Approved: April 06, 2009

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Microbac Laboratories Inc.
Instrument Run Log

Instrument: HPMS6 Dataset: 040109
Analyst1: FJB Analyst2: NA
Method: 8260B SOP: MSV01 Rev: 12
Method: 624 SOP: MSV10 Rev: 7
Method: 5030/5035 SOP: PAT01 Rev: 11
Maintenance Log ID: 28240

Internal Standard: STD31689 Surrogate Standard: STD31866
CCV: STD31950 LCS: STD31951 MS/MSD: STD31951
Column 1 ID: RTX502.2 Column 2 ID: NA
Workgroups: WG298812

Comments:

Comments

Seq.	Rerun	Dil.	Reason	Analytes
29				
File ID: 6M82568				
RR, BFB failed.				
30				
File ID: 6M82569				
RR, BFB failed. Changed septum.				
23	X	1	Missed Tune	
File ID: 6M82592				

Approved: April 06, 2009

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Microbac Laboratories Inc.

Data Checklist

Date: 18-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27121

Analytical Workgroups: WG297559

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	X
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	
Check for compliance with method and project specific requirements	
Check the completeness of reported information	
Check the information for the report narrative	
Check the reasonableness of the results	

Primary Reviewer:
19-MAR-2009

Tiffany Bailey

Secondary Reviewer:

Microbac Laboratories Inc.

Data Checklist

Date: 19-MAR-2009

Analyst: MES

Analyst: NA

Method: 8260/624

Instrument: HPMS6

Curve Workgroup: NA

Runlog ID: 27140

Analytical Workgroups: WG297666

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	NA
TCL Hits	NA
Spectra of TCL Hits	NA
Surrogates	NA
Internal Standards Criteria	NA
Library Searches	NA
Calculations & Correct Factors	NA
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	NA
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	MES
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
20-MAR-2009

Secondary Reviewer:
20-MAR-2009

Mary Schilling

MDA

Microbac Laboratories Inc.

Data Checklist

Date: 19-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27161

Analytical Workgroups: WG297551

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
20-MAR-2009

Tiffany Bailey

Secondary Reviewer:
23-MAR-2009

Michael A. Bailey

Microbac Laboratories Inc.

Data Checklist

Date: 31-MAR-2009

Analyst: TMB

Analyst: NA

Method: 8260

Instrument: HPMS10

Curve Workgroup: NA

Runlog ID: 27332

Analytical Workgroups: WG298625

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	NA
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	X
Reruns	X
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	TMB
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
31-MAR-2009

Tiffany Bailey

Secondary Reviewer:
01-APR-2009

MDA

Microbac Laboratories Inc.

Data Checklist

Date: 01-APR-2009

Analyst: FJB

Analyst: NA

Method: 8260/624

Instrument: HPMS6

Curve Workgroup: NA

Runlog ID: 27416

Analytical Workgroups: WG298812

System Performance Check	NA
BFB	X
Initial Calibration	X
Average RF	X
Linear Reg or Higher Order Curve	X
Second Source standard % Difference	X
Continuing Calibration /Check Standards	X
Project/Client Specific Requirements	X
Special Standards	NA
Blanks	X
TCL's	X
Surrogates	X
LCS (Laboratory Control Sample)	X
Recoveries	X
Surrogates	X
MS/MSD/Duplicates	X
Samples	X
TCL Hits	X
Spectra of TCL Hits	X
Surrogates	X
Internal Standards Criteria	X
Library Searches	NA
Calculations & Correct Factors	X
Dilutions Run	NA
Reruns	NA
Manual Integrations	NA
Case Narrative	X
Results Reporting/Data Qualifiers	X
KOBRA Workgroup Data	X
Check for Completeness	X
Primary Reviewer	MES
Secondary Reviewer	MDA
Check for compliance with method and project specific requirements	X
Check the completeness of reported information	X
Check the information for the report narrative	X
Check the reasonableness of the results	X

Primary Reviewer:
06-APR-2009

Secondary Reviewer:
06-APR-2009

Mary Schilling

Michael

Analytical Method: 8260B

AAB#: WG298625

Login Number: L09030671

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW36-033009	03/30/09	03/31/09	03/31/09	14	1.56	03/31/09	14	1.56	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Analytical Method: 8260B

AAB#: WG298812

Login Number: L09030671

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW28-033009	03/30/09	03/31/09	04/01/09	14	2.15	04/01/09	14	2.15	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

Login Number: L09030671
Instrument Id: HPMS6
Workgroup (AAB#): WG298812

Method: 8260
CAL ID: HPMS6 - 19-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030671-02	1.00	02	101	103	97.4	95.2
WG298812-01	1.00	01	102	98.8	96.8	92.8
WG298812-02	1.00	01	96.7	97.1	94.2	94.3
WG298812-06	1.00	01	117	108	101	96.3

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

Login Number: L09030671
Instrument Id: HPMS10
Workgroup (AAB#): WG298625

Method: 8260
CAL ID: HPMS10 - 18-MAR-09
Matrix: Water

Sample Number	Dilution	Tag	1	2	3	4
L09030671-01	500	DL01	114	111	91.2	<u>114</u>
WG298625-01	1.00	01	105	<u>121</u>	89.7	102
WG298625-02	1.00	01	99.2	102	96.8	97.0
WG298625-03	1.00	01	96.2	104	99.6	98.1

Surrogates	Surrogate Limits		
1 - 1,2-Dichloroethane-d4	80	-	120
2 - Dibromofluoromethane	86	-	118
3 - 4-Bromofluorobenzene	86	-	115
4 - Toluene-d8	88	-	110

Underline = Result out of surrogate limits

DL = surrogate diluted out

ND = surrogate not detected

METHOD BLANK SUMMARY

Login Number: <u>L09030671</u>	Work Group: <u>WG298625</u>
Blank File ID: <u>10M71462</u>	Blank Sample ID: <u>WG298625-01</u>
Prep Date: <u>03/31/09 12:13</u>	Instrument ID: <u>HPMS10</u>
Analyzed Date: <u>03/31/09 12:13</u>	Method: <u>8260B</u>
Analyst: <u>TMB</u>	

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298625-02	10M71463	03/31/09 12:46	01
LCS2	WG298625-03	10M71464	03/31/09 13:18	01
16WW36-033009	L09030671-01	10M71479	03/31/09 21:23	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 1359427
Report generated 04/06/2009 15:06



METHOD BLANK SUMMARY

Login Number: <u>L09030671</u>	Work Group: <u>WG298812</u>
Blank File ID: <u>6M82573</u>	Blank Sample ID: <u>WG298812-01</u>
Prep Date: <u>04/01/09 18:15</u>	Instrument ID: <u>HPMS6</u>
Analyzed Date: <u>04/01/09 18:15</u>	Method: <u>8260B</u>
Analyst: <u>FJB</u>	

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298812-02	6M82574	04/01/09 18:47	01
16WW28-033009	L09030671-02	6M82576	04/01/09 19:53	02

Report Name: BLANK_SUMMARY
PDF File ID: 1359427
Report generated 04/06/2009 15:06



Login Number: L09030671 Prep Date: 03/31/09 12:13 Sample ID: WG298625-01
Instrument ID: HPMS10 Run Date: 03/31/09 12:13 Prep Method: 5030B
File ID: 10M71462 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298625 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1359450

06-APR-2009 15:06



Login Number: L09030671 Prep Date: 03/31/09 12:13 Sample ID: WG298625-01
Instrument ID: HPMS10 Run Date: 03/31/09 12:13 Prep Method: 5030B
File ID: 10M71462 Analyst: TMB Method: 8260B
Workgroup (AAB#): WG298625 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS10 - 18-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	121	86 - 118	FAIL
1,2-Dichloroethane-d4	105	80 - 120	PASS
Toluene-d8	102	88 - 110	PASS
4-Bromofluorobenzene	89.7	86 - 115	PASS

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1359450
06-APR-2009 15:06



Login Number: L09030671 Prep Date: 04/01/09 18:15 Sample ID: WG298812-01
Instrument ID: HPMS6 Run Date: 04/01/09 18:15 Prep Method: 5030B
File ID: 6M82573 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG298812 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS6 - 19-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Acetone	2.50	10.0	2.50	1	U
Benzene	0.125	1.00	0.125	1	U
Bromobenzene	0.125	1.00	0.125	1	U
Bromochloromethane	0.200	1.00	0.200	1	U
Bromodichloromethane	0.250	1.00	0.250	1	U
Bromoform	0.500	1.00	0.500	1	U
Bromomethane	0.500	1.00	0.500	1	U
2-Butanone	2.50	10.0	2.50	1	U
n-Butylbenzene	0.250	1.00	0.250	1	U
sec-Butylbenzene	0.250	1.00	0.250	1	U
tert-Butylbenzene	0.250	1.00	0.250	1	U
Carbon disulfide	0.500	1.00	0.500	1	U
Carbon tetrachloride	0.250	1.00	0.250	1	U
Chlorobenzene	0.125	1.00	0.125	1	U
Chlorodibromomethane	0.250	1.00	0.250	1	U
Chloroethane	0.500	1.00	0.500	1	U
2-Chloroethyl vinyl ether	2.00	10.0	2.00	1	U
Chloroform	0.125	1.00	0.125	1	U
Chloromethane	0.250	1.00	0.250	1	U
2-Chlorotoluene	0.125	1.00	0.125	1	U
4-Chlorotoluene	0.250	1.00	0.250	1	U
1,2-Dibromo-3-chloropropane	1.00	5.00	1.00	1	U
1,2-Dibromoethane	0.250	1.00	0.250	1	U
Dibromomethane	0.250	1.00	0.250	1	U
1,2-Dichlorobenzene	0.125	1.00	0.125	1	U
1,3-Dichlorobenzene	0.250	1.00	0.250	1	U
1,4-Dichlorobenzene	0.125	1.00	0.125	1	U
Dichlorodifluoromethane	0.250	1.00	0.250	1	U
1,1-Dichloroethane	0.125	1.00	0.125	1	U
1,2-Dichloroethane	0.250	1.00	0.250	1	U
1,1-Dichloroethene	0.500	1.00	0.500	1	U
cis-1,2-Dichloroethene	0.250	1.00	0.250	1	U
trans-1,2-Dichloroethene	0.250	1.00	0.250	1	U
1,2-Dichloropropane	0.200	1.00	0.200	1	U
1,3-Dichloropropane	0.200	1.00	0.200	1	U
2,2-Dichloropropane	0.250	1.00	0.250	1	U
cis-1,3-Dichloropropene	0.250	1.00	0.250	1	U
trans-1,3-Dichloropropene	0.500	1.00	0.500	1	U
1,1-Dichloropropene	0.250	1.00	0.250	1	U
Ethylbenzene	0.250	1.00	0.250	1	U
2-Hexanone	2.50	10.0	2.50	1	U
Hexachlorobutadiene	0.250	1.00	0.250	1	U

Report Name: BLANK

PDF ID: 1359450

06-APR-2009 15:06



Login Number: L09030671 Prep Date: 04/01/09 18:15 Sample ID: WG298812-01
Instrument ID: HPMS6 Run Date: 04/01/09 18:15 Prep Method: 5030B
File ID: 6M82573 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG298812 Matrix: Water Units: ug/L
Contract #: DACA56-94-D-0020 Cal ID: HPMS6 - 19-MAR-09

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Isopropylbenzene	0.250	1.00	0.250	1	U
p-Isopropyltoluene	0.250	1.00	0.250	1	U
4-Methyl-2-pentanone	2.50	10.0	2.50	1	U
Methylene chloride	0.250	5.00	0.250	1	U
Naphthalene	0.200	1.00	0.200	1	U
n-Propylbenzene	0.125	1.00	0.125	1	U
Styrene	0.125	1.00	0.125	1	U
1,1,1,2-Tetrachloroethane	0.250	1.00	0.250	1	U
1,1,2,2-Tetrachloroethane	0.125	1.00	0.125	1	U
Tetrachloroethene	0.250	1.00	0.250	1	U
Toluene	0.250	1.00	0.250	1	U
1,2,3-Trichlorobenzene	0.150	1.00	0.150	1	U
1,2,4-Trichlorobenzene	0.200	1.00	0.200	1	U
1,1,1-Trichloroethane	0.250	1.00	0.250	1	U
1,1,2-Trichloroethane	0.250	1.00	0.250	1	U
Trichloroethene	0.250	1.00	0.250	1	U
Trichlorofluoromethane	0.250	1.00	0.250	1	U
1,2,3-Trichloropropane	0.500	1.00	0.500	1	U
1,2,4-Trimethylbenzene	0.250	1.00	0.250	1	U
1,3,5-Trimethylbenzene	0.250	1.00	0.250	1	U
Vinyl acetate	2.50	10.0	2.50	1	U
Vinyl chloride	0.250	1.00	0.250	1	U
o-Xylene	0.250	1.00	0.250	1	U
m-,p-Xylene	0.500	1.00	0.500	1	U

Surrogates	% Recovery	Surrogate Limits	Qualifier
Dibromofluoromethane	98.8	86 - 118	PASS
1,2-Dichloroethane-d4	102	80 - 120	PASS
Toluene-d8	92.8	88 - 110	PASS
4-Bromofluorobenzene	96.8	86 - 115	PASS

SDL Method Detection Limit

PQL Reporting/Practical Quantitation Limit

ND Analyte Not detected at or above reporting limit

* |Analyte concentration| > RL

Report Name: BLANK

PDF ID: 1359450

06-APR-2009 15:06



Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298812-02
Instrument ID: HPMS6 Run Time: 18:47 Prep Method: 5030B
File ID: 6M82574 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG298812 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD31951 Cal ID: HPMS6 - 19-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits			Q
Acetone	20.0	19.0	95.0	40	-	142	
Benzene	20.0	20.2	101	80	-	121	
Bromobenzene	20.0	19.8	98.9	80	-	120	
Bromochloromethane	20.0	21.0	105	65	-	130	
Bromodichloromethane	20.0	22.0	110	80	-	131	
Bromoform	20.0	18.8	93.9	70	-	130	
Bromomethane	20.0	20.9	104	30	-	145	
2-Butanone	20.0	24.3	121	30	-	150	
n-Butylbenzene	20.0	21.5	108	80	-	131	
sec-Butylbenzene	20.0	21.2	106	80	-	127	
tert-Butylbenzene	20.0	19.7	98.6	80	-	126	
Carbon disulfide	20.0	19.5	97.3	58	-	138	
Carbon tetrachloride	20.0	21.6	108	65	-	140	
Chlorobenzene	20.0	19.0	95.1	80	-	120	
Chlorodibromomethane	20.0	20.6	103	60	-	135	
Chloroethane	20.0	19.0	95.0	60	-	135	
2-Chloroethyl vinyl ether	20.0	19.3	96.7	58	-	151	
Chloroform	20.0	20.6	103	80	-	125	
Chloromethane	20.0	19.1	95.6	40	-	125	
2-Chlorotoluene	20.0	19.5	97.3	80	-	127	
4-Chlorotoluene	20.0	20.4	102	80	-	126	
1,2-Dibromo-3-chloropropane	20.0	19.4	97.1	50	-	130	
1,2-Dibromoethane	20.0	20.3	102	80	-	125	
Dibromomethane	20.0	21.5	108	75	-	125	
1,2-Dichlorobenzene	20.0	19.5	97.7	80	-	125	
1,3-Dichlorobenzene	20.0	18.9	94.7	80	-	120	
1,4-Dichlorobenzene	20.0	18.5	92.3	80	-	120	
Dichlorodifluoromethane	20.0	19.9	99.6	50	-	133	
1,1-Dichloroethane	20.0	20.1	100	80	-	125	
1,2-Dichloroethane	20.0	21.1	106	80	-	129	
1,1-Dichloroethene	20.0	19.9	99.6	80	-	132	
cis-1,2-Dichloroethene	20.0	20.9	104	70	-	125	
trans-1,2-Dichloroethene	20.0	19.9	99.7	80	-	127	
1,2-Dichloropropane	20.0	20.4	102	80	-	120	
1,3-Dichloropropane	20.0	20.0	100	80	-	120	
2,2-Dichloropropane	20.0	20.8	104	80	-	133	
cis-1,3-Dichloropropene	20.0	21.3	107	70	-	130	
trans-1,3-Dichloropropene	20.0	18.5	92.3	80	-	130	
1,1-Dichloropropene	20.0	20.8	104	75	-	130	
Ethylbenzene	20.0	20.1	101	80	-	122	
2-Hexanone	20.0	17.0	84.8	55	-	130	

LCS - Modified 03/06/2008
PDF File ID: 1359451
Report generated: 04/06/2009 15:06



Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298812-02
Instrument ID: HPMS6 Run Time: 18:47 Prep Method: 5030B
File ID: 6M82574 Analyst: FJB Method: 8260B
Workgroup (AAB#): WG298812 Matrix: Water Units: ug/L
QC Key: STD Lot#: STD31951 Cal ID: HPMS6 - 19-MAR-09

Analytes	Expected	Found	% Rec	LCS Limits			Q
Hexachlorobutadiene	20.0	21.6	108	72	-	132	
Isopropylbenzene	20.0	16.3	81.3	80	-	122	
p-Isopropyltoluene	20.0	20.3	102	80	-	122	
4-Methyl-2-pentanone	20.0	18.8	94.1	64	-	140	
Methylene chloride	20.0	19.3	96.6	80	-	123	
Naphthalene	20.0	17.6	87.8	59	-	149	
n-Propylbenzene	20.0	21.2	106	80	-	129	
Styrene	20.0	17.9	89.6	80	-	123	
1,1,1,2-Tetrachloroethane	20.0	20.4	102	80	-	130	
1,1,2,2-Tetrachloroethane	20.0	18.7	93.3	79	-	125	
Tetrachloroethene	20.0	19.6	97.9	80	-	124	
Toluene	20.0	20.1	100	80	-	124	
1,2,3-Trichlorobenzene	20.0	20.6	103	55	-	140	
1,2,4-Trichlorobenzene	20.0	19.5	97.3	65	-	135	
1,1,1-Trichloroethane	20.0	20.7	104	80	-	134	
1,1,2-Trichloroethane	20.0	20.3	102	80	-	125	
Trichloroethene	20.0	20.0	100	80	-	122	
Trichlorofluoromethane	20.0	20.5	102	62	-	151	
1,2,3-Trichloropropane	20.0	20.0	99.8	75	-	125	
1,2,4-Trimethylbenzene	20.0	20.4	102	80	-	125	
1,3,5-Trimethylbenzene	20.0	18.0	89.8	80	-	127	
Vinyl acetate	20.0	13.7	68.7	10	-	150	
Vinyl chloride	20.0	20.5	102	65	-	140	
o-Xylene	20.0	20.8	104	80	-	122	
m-,p-Xylene	40.0	40.9	102	80	-	122	

Surrogates	% Recovery	Surrogate Limits			Qualifier
Dibromofluoromethane	97.1	86	-	118	PASS
1,2-Dichloroethane-d4	96.7	80	-	120	PASS
Toluene-d8	94.3	88	-	110	PASS
4-Bromofluorobenzene	94.2	86	-	115	PASS

* FAILS %REC LIMIT

Login Number: L09030671 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298625 Units: ug/L
QC Key: STD Lot #: STD31951

Sample ID: WG298625-02 LCS File ID: 10M71463 Run Date: 03/31/2009 12:46
Sample ID: WG298625-03 LCS2 File ID: 10M71464 Run Date: 03/31/2009 13:18

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
Acetone	20.0	26.8	134	20.0	25.5	128	4.84	40 - 142	20	
Benzene	20.0	21.2	106	20.0	21.2	106	0.435	80 - 121	20	
Bromobenzene	20.0	24.2	121	20.0	24.4	122	0.603	80 - 120	20	*
Bromochloromethane	20.0	22.1	110	20.0	21.4	107	2.89	65 - 130	20	
Bromodichloromethane	20.0	23.8	119	20.0	23.7	118	0.372	80 - 131	20	
Bromoform	20.0	24.0	120	20.0	23.5	117	2.31	70 - 130	20	
Bromomethane	20.0	20.9	105	20.0	21.5	107	2.68	30 - 145	20	
2-Butanone	20.0	25.9	130	20.0	24.3	122	6.30	30 - 150	20	
n-Butylbenzene	20.0	24.1	120	20.0	25.6	128	6.06	80 - 131	20	
sec-Butylbenzene	20.0	22.8	114	20.0	23.6	118	3.30	80 - 127	20	
tert-Butylbenzene	20.0	19.8	99.0	20.0	20.7	103	4.21	80 - 126	20	
Carbon disulfide	20.0	19.7	98.3	20.0	19.2	96.0	2.32	58 - 138	20	
Carbon tetrachloride	20.0	21.0	105	20.0	21.4	107	1.85	65 - 140	20	
Chlorobenzene	20.0	22.2	111	20.0	22.4	112	0.783	80 - 120	20	
Chlorodibromomethane	20.0	21.5	108	20.0	22.0	110	2.28	60 - 135	20	
Chloroethane	20.0	18.8	94.1	20.0	19.8	98.9	4.99	60 - 135	20	
2-Chloroethyl vinyl ether	20.0	21.5	107	20.0	20.7	104	3.58	58 - 151	20	
Chloroform	20.0	21.4	107	20.0	21.5	107	0.470	80 - 125	20	
Chloromethane	20.0	21.1	106	20.0	20.0	100	5.61	40 - 125	20	
2-Chlorotoluene	20.0	23.3	117	20.0	24.3	122	4.17	80 - 127	20	
4-Chlorotoluene	20.0	21.0	105	20.0	21.5	107	2.20	80 - 126	20	
1,2-Dibromo-3-chloropropane	20.0	22.6	113	20.0	22.6	113	0.113	50 - 130	20	
1,2-Dibromoethane	20.0	22.2	111	20.0	22.5	113	1.45	80 - 125	20	
Dibromomethane	20.0	23.2	116	20.0	22.7	113	2.57	75 - 125	20	
1,2-Dichlorobenzene	20.0	23.0	115	20.0	24.1	121	4.87	80 - 125	20	
1,3-Dichlorobenzene	20.0	23.0	115	20.0	23.8	119	3.48	80 - 120	20	
1,4-Dichlorobenzene	20.0	21.0	105	20.0	21.9	109	4.35	80 - 120	20	
Dichlorodifluoromethane	20.0	19.7	98.7	20.0	20.2	101	2.33	50 - 133	20	
1,1-Dichloroethane	20.0	21.5	108	20.0	21.5	107	0.208	80 - 125	20	
1,2-Dichloroethane	20.0	22.7	113	20.0	22.4	112	1.26	80 - 129	20	
1,1-Dichloroethene	20.0	20.7	103	20.0	21.0	105	1.64	80 - 132	20	
cis-1,2-Dichloroethene	20.0	21.8	109	20.0	22.2	111	1.63	70 - 125	20	
trans-1,2-Dichloroethene	20.0	21.0	105	20.0	21.0	105	0.0586	80 - 127	20	
1,2-Dichloropropane	20.0	21.6	108	20.0	21.6	108	0.127	80 - 120	20	
1,3-Dichloropropane	20.0	21.3	106	20.0	22.1	110	3.72	80 - 120	20	
2,2-Dichloropropane	20.0	19.6	97.9	20.0	19.4	97.1	0.772	80 - 133	20	
cis-1,3-Dichloropropene	20.0	21.8	109	20.0	21.9	110	0.550	70 - 130	20	
trans-1,3-Dichloropropene	20.0	19.0	94.9	20.0	19.1	95.6	0.680	80 - 130	20	
1,1-Dichloropropene	20.0	21.1	105	20.0	21.5	108	1.90	75 - 130	20	
Ethylbenzene	20.0	23.2	116	20.0	23.8	119	2.54	80 - 122	20	

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1355202
Report generated: 04/06/2009 15:06



Login Number: L09030671 Analyst: TMB Prep Method: 5030B
Instrument ID: HPMS10 Matrix: Water Method: 8260B
Workgroup (AAB#): WG298625 Units: ug/L
QC Key: STD Lot #: STD31951

Sample ID: WG298625-02 LCS File ID: 10M71463 Run Date: 03/31/2009 12:46
Sample ID: WG298625-03 LCS2 File ID: 10M71464 Run Date: 03/31/2009 13:18

Analytes	LCS			LCS2			%RPD	%Rec Limits	RPD Lmt	Q
	Known	Found	% REC	Known	Found	% REC				
2-Hexanone	20.0	26.9	135	20.0	26.6	133	1.29	55 - 130	20	*
Hexachlorobutadiene	20.0	23.1	115	20.0	24.2	121	4.68	72 - 132	20	
Isopropylbenzene	20.0	16.5	82.5	20.0	16.4	82.1	0.416	80 - 122	20	
p-Isopropyltoluene	20.0	21.5	108	20.0	22.6	113	4.99	80 - 122	20	
4-Methyl-2-pentanone	20.0	25.8	129	20.0	24.8	124	3.99	64 - 140	20	
Methylene chloride	20.0	22.4	112	20.0	22.5	112	0.614	80 - 123	20	
Naphthalene	20.0	24.2	121	20.0	25.8	129	6.02	59 - 149	20	
n-Propylbenzene	20.0	21.6	108	20.0	22.4	112	3.55	80 - 129	20	
Styrene	20.0	20.9	104	20.0	21.0	105	0.795	80 - 123	20	
1,1,1,2-Tetrachloroethane	20.0	20.0	100	20.0	20.1	100	0.329	80 - 130	20	
1,1,2,2-Tetrachloroethane	20.0	23.5	118	20.0	24.2	121	3.01	79 - 125	20	
Tetrachloroethene	20.0	20.8	104	20.0	21.7	108	4.08	80 - 124	20	
Toluene	20.0	22.0	110	20.0	22.4	112	1.59	80 - 124	20	
1,2,3-Trichlorobenzene	20.0	20.9	104	20.0	22.4	112	7.13	55 - 140	20	
1,2,4-Trichlorobenzene	20.0	26.3	132	20.0	27.5	138	4.33	65 - 135	20	*
1,1,1-Trichloroethane	20.0	21.3	107	20.0	21.5	107	0.711	80 - 134	20	
1,1,2-Trichloroethane	20.0	21.8	109	20.0	21.7	109	0.200	80 - 125	20	
Trichloroethene	20.0	21.4	107	20.0	21.5	107	0.558	80 - 122	20	
Trichlorofluoromethane	20.0	20.3	101	20.0	20.4	102	0.797	62 - 151	20	
1,2,3-Trichloropropane	20.0	24.4	122	20.0	24.4	122	0.128	75 - 125	20	
1,2,4-Trimethylbenzene	20.0	25.1	125	20.0	26.3	131	4.63	80 - 125	20	*
1,3,5-Trimethylbenzene	20.0	21.9	110	20.0	22.8	114	3.84	80 - 127	20	
Vinyl acetate	20.0	16.7	83.5	20.0	16.3	81.3	2.63	10 - 150	20	
Vinyl chloride	20.0	21.9	110	20.0	21.9	110	0.103	65 - 140	20	
o-Xylene	20.0	21.2	106	20.0	21.7	108	2.40	80 - 122	20	
m-, p-Xylene	40.0	42.1	105	40.0	42.4	106	0.638	80 - 122	20	

Surogates	LCS	LCS2	Surrogate Limits	Qualifier
	% Recovery	% Recovery		
1,2-Dichloroethane-d4	99.2	96.2	80 - 120	PASS
Dibromofluoromethane	102	104	86 - 118	PASS
4-Bromofluorobenzene	96.8	99.6	86 - 115	PASS
Toluene-d8	97.0	98.1	88 - 110	PASS

* FAILS %REC LIMIT
FAILS RPD LIMIT

LCS_LCS2 - Modified 03/06/2008
PDF File ID: 1355202
Report generated: 04/06/2009 15:06



BFB

Login Number: L09030671

Instrument: HPMS10

Analyst: TMB

Workgroup: WG297559

Tune ID: WG297559-01

Run Date: 03/18/2009

Run Time: 09:00

File ID: 10M71174

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	25.0	5747	PASS
75.0	95.0	30.0	60.0	47.9	10994	PASS
95.0	95.0	100	100	100	22949	PASS
96.0	95.0	5.00	9.00	6.91	1585	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	92.1	21128	PASS
175	174	5.00	9.00	7.12	1504	PASS
176	174	95.0	101	97.0	20489	PASS
177	176	5.00	9.00	7.42	1521	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-02	STD	01	03/18/2009 09:26	
WG297559-04	STD	01	03/18/2009 10:31	
WG297559-03	STD	01	03/18/2009 11:03	
WG297559-05	STD	01	03/18/2009 12:08	
WG297559-06	STD	01	03/18/2009 12:40	
WG297559-07	STD	01	03/18/2009 13:13	
WG297559-08	STD-CCV	01	03/18/2009 13:45	
WG297559-09	STD	01	03/18/2009 14:17	
WG297559-10	STD	01	03/18/2009 14:50	
WG297559-11	STD	01	03/18/2009 15:23	
WG297559-12	SSCV	01	03/18/2009 16:58	

* Sample past 12 hour tune limit

BFB

Login Number: L09030671
Instrument: HPMS10
Analyst: TMB
Workgroup: WG297549

Tune ID: WG297549-01
Run Date: 03/19/2009
Run Time: 15:01
File ID: 10M71198

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	23.1	1728	PASS
75.0	95.0	30.0	60.0	50.1	3742	PASS
95.0	95.0	100	100	100	7467	PASS
96.0	95.0	5.00	9.00	6.19	462	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	91.9	6861	PASS
175	174	5.00	9.00	8.09	555	PASS
176	174	95.0	101	96.5	6621	PASS
177	176	5.00	9.00	7.34	486	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297559-12	SSCV	02	03/19/2009 17:05	

* Sample past 12 hour tune limit

BFB

Login Number: L09030671
Instrument: HPMS10
Analyst: TMB
Workgroup: WG298624

Tune ID: WG298624-01
Run Date: 03/31/2009
Run Time: 10:44
File ID: 10M71459

Cal ID: HPMS10 - 18-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	24.5	6498	PASS
75.0	95.0	30.0	60.0	48.3	12789	PASS
95.0	95.0	100	100	100	26498	PASS
96.0	95.0	5.00	9.00	6.62	1755	PASS
173	174	0	2.00	0.726	176	PASS
174	95.0	50.0	100	91.5	24248	PASS
175	174	5.00	9.00	8.84	2143	PASS
176	174	95.0	101	97.6	23674	PASS
177	176	5.00	9.00	6.02	1426	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298624-02	CCV	01	03/31/2009 11:08	
WG298625-01	BLANK	01	03/31/2009 12:13	
WG298625-02	LCS	01	03/31/2009 12:46	
WG298625-03	LCS2	01	03/31/2009 13:18	
L09030671-01	16WW36-033009	DL01	03/31/2009 21:23	

* Sample past 12 hour tune limit

BFB

Login Number: L09030671

Instrument: HPMS6

Analyst: MES

Workgroup: WG297666

Tune ID: WG297666-01

Run Date: 03/19/2009

Run Time: 08:08

File ID: 6M82295

Cal ID: HPMS6 -

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	22.6	11981	PASS
75.0	95.0	30.0	60.0	51.4	27264	PASS
95.0	95.0	100	100	100	53002	PASS
96.0	95.0	5.00	9.00	6.66	3531	PASS
173	174	0	2.00	0.525	206	PASS
174	95.0	50.0	100	74.0	39226	PASS
175	174	5.00	9.00	7.55	2963	PASS
176	174	95.0	101	98.3	38552	PASS
177	176	5.00	9.00	6.43	2479	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG297666-02	STD	01	03/19/2009 08:39	
WG297666-03	STD	01	03/19/2009 09:12	
WG297666-04	STD	01	03/19/2009 09:44	
WG297666-05	STD	01	03/19/2009 10:53	
WG297666-06	STD	01	03/19/2009 11:25	
WG297666-07	STD	01	03/19/2009 12:01	
WG297666-08	STD-CCV	01	03/19/2009 12:33	
WG297666-09	STD	01	03/19/2009 13:05	
WG297666-10	STD	01	03/19/2009 13:37	
WG297666-11	STD	01	03/19/2009 14:09	
WG297666-13	SSCV	01	03/19/2009 15:54	
WG297666-12	SSCV	01	03/19/2009 16:26	

* Sample past 12 hour tune limit

BFB

Login Number: L09030671
Instrument: HPMS6
Analyst: FJB
Workgroup: WG298811

Tune ID: WG298811-01
Run Date: 04/01/2009
Run Time: 16:46
File ID: 6M82570

Cal ID: HPMS6 - 19-MAR-09

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50.0	95.0	15.0	40.0	21.6	8776	PASS
75.0	95.0	30.0	60.0	52.2	21218	PASS
95.0	95.0	100	100	100	40653	PASS
96.0	95.0	5.00	9.00	6.67	2711	PASS
173	174	0	2.00	0	0	PASS
174	95.0	50.0	100	75.3	30616	PASS
175	174	5.00	9.00	7.41	2269	PASS
176	174	95.0	101	98.3	30088	PASS
177	176	5.00	9.00	6.53	1965	PASS

This check relates to the following samples:

Lab ID	Client ID	Tag	Date Analyzed	Q
WG298811-02	CCV	01	04/01/2009 17:10	
WG298812-01	BLANK	01	04/01/2009 18:15	
WG298812-02	LCS	01	04/01/2009 18:47	
L09030671-02	16WW28-033009	02	04/01/2009 19:53	
WG298812-03	REF	01	04/01/2009 22:38	
WG298812-04	MS	01	04/01/2009 23:12	
WG298812-05	MSD	01	04/01/2009 23:45	
WG298812-06	BLANK2	01	04/02/2009 06:02	*

* Sample past 12 hour tune limit

Login Number: L09030671
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.1883	3.35		
1,2-Dichloropropane	CCC	0.2703	4.94		
Chloroform	CCC	0.3958	7.78		
Ethylbenzene	CCC	0.3605	14.1		
Toluene	CCC	1.132	7.54		
Vinyl Chloride	CCC	0.2730	19.8		0.99900
1,1,2,2-Tetrachloroethane	SPCC	0.7145	16.4		0.99900
1,1-Dichloroethane	SPCC	0.4721	6.28		
Bromoform	SPCC	0.1797	11.2		
Chlorobenzene	SPCC	0.7377	4.82		
Chloromethane	SPCC	0.4126	5.93		
1,1,1,2-Tetrachloroethane		0.3618	13.8		
1,1,1-Trichloroethane		0.3354	4.49		
1,1,2-Trichloroethane		0.2312	14.7		
1,1-Dichloropropene		0.2958	5.90		
1,2,3-Trichlorobenzene		0.8396	16.0		1.00000
1,2,3-Trichloropropane		0.1970	19.8		0.99900
1,2,4-Trichlorobenzene		0.7553	14.7		
1,2,4-Trimethylbenzene		2.395	14.2		
1,2-Dibromo-3-Chloropropane		0.1166	16.2		0.99900
1,2-Dibromoethane		0.2259	13.6		
1,2-Dichlorobenzene		1.338	15.6	1.00000	
1,2-Dichloroethane		0.3045	5.19		
1,3,5-Trimethylbenzene		3.088	11.5		
1,3-Dichlorobenzene		1.174	8.64		
1,3-Dichloropropane		0.4061	14.2		
1,4-Dichlorobenzene		1.215	12.5		
2,2-Dichloropropane		0.3380	5.98		
2-Butanone		0.08153	5.47		
2-Chloroethyl Vinyl Ether		0.09620	26.8		1.00000
2-Chlorotoluene		2.102	12.3		
2-Hexanone		0.1322	7.49		
4-Chlorotoluene		1.554	10.8		
4-Methyl-2-Pentanone		0.06200	4.77		
Acetone		0.05288	11.2		
Benzene		0.8900	11.7		
Bromobenzene		0.7691	11.7		
Bromochloromethane		0.1104	5.81		
Bromodichloromethane		0.2693	3.29		
Bromomethane		0.1716	10.7		
Carbon Disulfide		0.6995	7.14		
Carbon Tetrachloride		0.2761	4.74		
Chloroethane		0.1223	7.92		
Dibromochloromethane		0.3035	14.0		
Dibromomethane		0.1134	4.65		

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Login Number: L09030671
Analytical Method: 8260B
ICAL Workgroup: WG297559

Instrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Dichlorodifluoromethane		0.2296	7.70		
Hexachlorobutadiene		0.4610	12.7		
Isopropylbenzene		1.233	6.54		
Methylene Chloride		0.3418	57.3	0.99900	
Naphthalene		1.213	13.6		
Styrene		0.5724	23.1		1.00000
Tetrachloroethene		0.2654	6.64		
Trichloroethene		0.2329	3.80		
Trichlorofluoromethane		0.3511	7.69		
Vinyl Acetate		0.4106	39.0		0.99800
cis-1,2-Dichloroethene		0.2353	3.88		
cis-1,3-Dichloropropene		0.2982	3.63		
m-,p-Xylene		0.4183	12.6		
n-Butylbenzene		1.578	12.3		
n-Propylbenzene		2.444	14.3		
o-Xylene		0.4523	8.26		
p-Isopropyltoluene		2.388	15.5		1.00000
sec-Butylbenzene		2.894	12.5		
tert-Butylbenzene		0.6459	13.8		
trans-1,2-Dichloroethene		0.2154	3.55		
trans-1,3-Dichloropropene		0.4012	15.0		

R = Correlation coefficient; 0.995 minimum
R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

Login Number: L09030671
Analytical Method: 8260B
ICAL Workgroup: WG297666

Instrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
1,1-Dichloroethene	CCC	0.4149	3.89		
1,2-Dichloropropane	CCC	0.2157	8.34		
Chloroform	CCC	0.5369	4.81		
Ethylbenzene	CCC	0.4508	7.74		
Toluene	CCC	1.178	7.46		
Vinyl Chloride	CCC	0.3085	20.9		1.00000
1,1,2,2-Tetrachloroethane	SPCC	0.3701	6.63		
1,1-Dichloroethane	SPCC	0.4764	2.88		
Bromoform	SPCC	0.1705	16.1	1.00000	
Chlorobenzene	SPCC	0.8634	4.49		
Chloromethane	SPCC	0.3499	13.7		
1,1,1,2-Tetrachloroethane		0.3144	6.38		
1,1,1-Trichloroethane		0.5079	4.28		
1,1,2-Trichloroethane		0.1997	8.94		
1,1-Dichloropropene		0.3461	8.18		
1,2,3-Trichlorobenzene		0.5770	11.4		
1,2,3-Trichloropropane		0.1258	10.3		
1,2,4-Trichlorobenzene		0.6604	10.2		
1,2,4-Trimethylbenzene		2.049	9.17		
1,2-Dibromo-3-Chloropropane		0.07748	12.6		
1,2-Dibromoethane		0.2099	9.18		
1,2-Dichlorobenzene		1.110	7.07		
1,2-Dichloroethane		0.4087	6.30		
1,3,5-Trimethylbenzene		1.890	16.5		1.00000
1,3-Dichlorobenzene		1.246	5.10		
1,3-Dichloropropane		0.3624	4.64		
1,4-Dichlorobenzene		1.324	4.45		
2,2-Dichloropropane		0.4689	5.46		
2-Butanone		0.06572	7.80		
2-Chloroethyl Vinyl Ether		0.1035	9.69		
2-Chlorotoluene		2.112	8.84		
2-Hexanone		0.1105	5.66		
4-Chlorotoluene		1.822	8.07		
4-Methyl-2-Pentanone		0.04957	9.41		
Acetone		0.04855	8.06		
Benzene		0.9502	3.75		
Bromobenzene		0.5976	9.39		
Bromochloromethane		0.1514	8.26		
Bromodichloromethane		0.3788	4.59		
Bromomethane		0.1899	8.62		
Carbon Disulfide		0.7977	3.57		
Carbon Tetrachloride		0.4486	4.60		
Chloroethane		0.1792	4.78		
Dibromochloromethane		0.2809	11.2		
Dibromomethane		0.1374	6.22		

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Login Number: L09030671
Analytical Method: 8260B
ICAL Workgroup: WG297666

Instrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Dichlorodifluoromethane		0.4392	14.1		
Hexachlorobutadiene		0.2921	6.66		
Isopropylbenzene		1.349	16.1		1.00000
Methylene Chloride		0.3532	39.9	1.00000	
Naphthalene		0.9455	22.0	1.00000	
Styrene		0.8897	16.7		1.00000
Tetrachloroethene		0.3191	5.30		
Trichloroethene		0.2518	6.60		
Trichlorofluoromethane		0.5676	9.36		
Vinyl Acetate		0.3763	5.30		
cis-1,2-Dichloroethene		0.2584	7.64		
cis-1,3-Dichloropropene		0.3610	13.9		
m-,p-Xylene		0.5677	8.16		
n-Butylbenzene		1.670	12.1		
n-Propylbenzene		2.644	14.4		
o-Xylene		0.5236	13.5		
p-Isopropyltoluene		1.967	11.5		
sec-Butylbenzene		2.266	11.4		
tert-Butylbenzene		0.4135	8.19		
trans-1,2-Dichloroethene		0.2380	10.1		
trans-1,3-Dichloropropene		0.4283	11.0		

R = Correlation coefficient; 0.995 minimum
R² = Coefficient of determination; 0.99 minimum

If the %RSD is greater than the limit specified by the method or project QAP, then linear or quadratic equations will be used.

Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	2202.00000	0.1895	1.00	5391.00000	0.1825
1,2-Dichloropropane	NA	NA	NA	0.400	3447.00000	0.2967	1.00	7961.00000	0.2695
Chloroform	0.300	3765.00000	0.4221	0.400	5303.00000	0.4565	1.00	11678.0000	0.3954
Ethylbenzene	NA	NA	NA	0.400	2216.00000	0.3389	1.00	4956.00000	0.3082
Toluene	NA	NA	NA	0.400	8101.00000	1.239	1.00	17704.0000	1.101
Vinyl Chloride	NA	NA	NA	0.400	4209.00000	0.3623	1.00	8395.00000	0.2842
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	1867.00000	0.7911	1.00	4382.00000	0.7360
1,1-Dichloroethane	NA	NA	NA	0.400	5980.00000	0.5148	1.00	14353.0000	0.4859
Bromoform	NA	NA	NA	NA	NA	NA	1.00	2932.00000	0.1823
Chlorobenzene	NA	NA	NA	0.400	5231.00000	0.8000	1.00	11318.0000	0.7038
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	11928.0000	0.4038
1,1,1,2-Tetrachloroethane	NA	NA	NA	0.400	2590.00000	0.3961	1.00	6498.00000	0.4040
1,1,1-Trichloroethane	NA	NA	NA	0.400	4101.00000	0.3530	1.00	9575.00000	0.3242
1,1,2-Trichloroethane	NA	NA	NA	NA	NA	NA	1.00	3938.00000	0.2449
1,1-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7941.00000	0.2688
1,2,3-Trichlorobenzene	0.300	1998.00000	1.075	0.400	1820.00000	0.7712	1.00	4215.00000	0.7079
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	1.00	988.000000	0.1659
1,2,4-Trichlorobenzene	NA	NA	NA	0.400	1882.00000	0.7975	1.00	3520.00000	0.5912
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA	1.00	15067.0000	2.531
1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA	0.400	1481.00000	0.2265	1.00	4160.00000	0.2587
1,2-Dichlorobenzene	0.300	3433.00000	1.847	0.400	3104.00000	1.315	1.00	7574.00000	1.272
1,2-Dichloroethane	NA	NA	NA	0.400	3716.00000	0.3199	1.00	9055.00000	0.3066
1,3,5-Trimethylbenzene	NA	NA	NA	0.400	7819.00000	3.313	1.00	17996.0000	3.023
1,3-Dichlorobenzene	NA	NA	NA	0.400	2706.00000	1.147	1.00	6086.00000	1.022
1,3-Dichloropropane	NA	NA	NA	0.400	2928.00000	0.4478	1.00	7472.00000	0.4646
1,4-Dichlorobenzene	0.300	2921.00000	1.571	0.400	3078.00000	1.304	1.00	6987.00000	1.174
2,2-Dichloropropane	NA	NA	NA	0.400	4197.00000	0.3613	1.00	10617.0000	0.3594
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NA	NA	NA	0.400	5777.00000	2.448	1.00	12608.0000	2.118
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NA	NA	NA	0.400	3939.00000	1.669	1.00	7649.00000	1.285
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	13114.0000	1.129	1.00	26569.0000	0.8995
Bromobenzene	0.300	1718.00000	0.9242	0.400	1696.00000	0.7187	1.00	4142.00000	0.6957
Bromochloromethane	NA	NA	NA	0.400	1257.00000	0.1082	1.00	3455.00000	0.1170
Bromodichloromethane	NA	NA	NA	0.400	3178.00000	0.2736	1.00	7931.00000	0.2685
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	5192.00000	0.1758
Carbon Disulfide	NA	NA	NA	NA	NA	NA	1.00	21416.0000	0.7250
Carbon Tetrachloride	NA	NA	NA	0.400	3008.00000	0.2589	1.00	7989.00000	0.2705

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Column ID: F

Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	11388.0000	0.1885	5.00	30423.0000	0.1915	20.0	129120.000	0.1924
1,2-Dichloropropane	2.00	16354.0000	0.2707	5.00	44161.0000	0.2779	20.0	179925.000	0.2681
Chloroform	2.00	23569.0000	0.3901	5.00	63989.0000	0.4027	20.0	260617.000	0.3883
Ethylbenzene	2.00	9877.00000	0.2994	5.00	29075.0000	0.3171	20.0	181566.000	0.3766
Toluene	2.00	37280.0000	1.130	5.00	110456.000	1.205	20.0	568852.000	1.180
Vinyl Chloride	2.00	19052.0000	0.3153	5.00	46331.0000	0.2916	20.0	176450.000	0.2629
1,1,2,2-Tetrachloroethane	2.00	9114.00000	0.7433	5.00	26446.0000	0.8314	20.0	120640.000	0.7847
1,1-Dichloroethane	2.00	28294.0000	0.4683	5.00	78309.0000	0.4928	20.0	317741.000	0.4734
Bromoform	2.00	6657.00000	0.2018	5.00	18768.0000	0.2047	20.0	88251.0000	0.1831
Chlorobenzene	2.00	23414.0000	0.7098	5.00	66062.0000	0.7205	20.0	364419.000	0.7560
Chloromethane	2.00	28151.0000	0.4659	5.00	66075.0000	0.4158	20.0	264636.000	0.3943
1,1,1,2-Tetrachloroethane	2.00	13020.0000	0.3947	5.00	37528.0000	0.4093	20.0	158277.000	0.3283
1,1,1-Trichloroethane	2.00	20813.0000	0.3445	5.00	54388.0000	0.3423	20.0	226334.000	0.3372
1,1,2-Trichloroethane	2.00	8629.00000	0.2616	5.00	25114.0000	0.2739	20.0	104733.000	0.2173
1,1-Dichloropropene	2.00	17581.0000	0.2910	5.00	50118.0000	0.3154	20.0	206930.000	0.3083
1,2,3-Trichlorobenzene	2.00	8972.00000	0.7317	5.00	29413.0000	0.9247	20.0	150336.000	0.9778
1,2,3-Trichloropropane	2.00	2296.00000	0.1872	5.00	8209.00000	0.2581	20.0	34955.0000	0.2274
1,2,4-Trichlorobenzene	2.00	7582.00000	0.6183	5.00	24334.0000	0.7650	20.0	139374.000	0.9065
1,2,4-Trimethylbenzene	2.00	30951.0000	2.524	5.00	83508.0000	2.625	20.0	407638.000	2.651
1,2-Dibromo-3-Chloropropane	2.00	1387.00000	0.1131	5.00	4194.00000	0.1319	20.0	21152.0000	0.1376
1,2-Dibromoethane	2.00	7978.00000	0.2419	5.00	23909.0000	0.2607	20.0	105090.000	0.2180
1,2-Dichlorobenzene	2.00	14783.0000	1.206	5.00	39283.0000	1.235	20.0	196122.000	1.276
1,2-Dichloroethane	2.00	18595.0000	0.3077	5.00	50508.0000	0.3178	20.0	209078.000	0.3115
1,3,5-Trimethylbenzene	2.00	38274.0000	3.121	5.00	110038.000	3.459	20.0	523415.000	3.405
1,3-Dichlorobenzene	2.00	13095.0000	1.068	5.00	37192.0000	1.169	20.0	189568.000	1.233
1,3-Dichloropropane	2.00	14347.0000	0.4350	5.00	41484.0000	0.4524	20.0	182014.000	0.3776
1,4-Dichlorobenzene	2.00	12921.0000	1.054	5.00	37757.0000	1.187	20.0	183358.000	1.193
2,2-Dichloropropane	2.00	20892.0000	0.3458	5.00	54768.0000	0.3447	20.0	223111.000	0.3324
2-Butanone	NA	NA	NA	5.00	14139.0000	0.08900	20.0	55998.0000	0.08340
2-Chloroethyl Vinyl Ether	2.00	3445.00000	0.05700	5.00	11195.0000	0.07040	20.0	70968.0000	0.1057
2-Chlorotoluene	2.00	23650.0000	1.929	5.00	62080.0000	1.952	20.0	350791.000	2.282
2-Hexanone	NA	NA	NA	5.00	10691.0000	0.1166	20.0	62637.0000	0.1299
4-Chlorotoluene	2.00	16803.0000	1.370	5.00	48621.0000	1.529	20.0	238323.000	1.550
4-Methyl-2-Pentanone	NA	NA	NA	5.00	9058.00000	0.05700	20.0	43461.0000	0.06480
Acetone	NA	NA	NA	5.00	10133.0000	0.06380	20.0	35127.0000	0.05230
Benzene	2.00	51554.0000	0.8532	5.00	139846.000	0.8800	20.0	586477.000	0.8738
Bromobenzene	2.00	8732.00000	0.7121	5.00	24080.0000	0.7570	20.0	130066.000	0.8460
Bromochloromethane	2.00	6796.00000	0.1125	5.00	18750.0000	0.1180	20.0	74231.0000	0.1106
Bromodichloromethane	2.00	15558.0000	0.2575	5.00	45047.0000	0.2835	20.0	183553.000	0.2735
Bromomethane	2.00	12059.0000	0.1996	5.00	30234.0000	0.1903	20.0	105356.000	0.1570
Carbon Disulfide	2.00	43608.0000	0.7217	5.00	116649.000	0.7341	20.0	485162.000	0.7229
Carbon Tetrachloride	2.00	16790.0000	0.2779	5.00	46444.0000	0.2923	20.0	190198.000	0.2834

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Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	329580.000	0.1865	100	762552.000	0.1982	200	1363656.00	0.1776
1,2-Dichloropropane	50.0	459398.000	0.2600	100	1033249.00	0.2686	200	1926295.00	0.2509
Chloroform	50.0	657133.000	0.3718	100	1495126.00	0.3887	200	2658987.00	0.3463
Ethylbenzene	50.0	553747.000	0.4040	100	1250773.00	0.4287	200	2576983.00	0.4108
Toluene	50.0	1498157.00	1.093	100	3342944.00	1.146	200	6028123.00	0.9609
Vinyl Chloride	50.0	427744.000	0.2420	100	942149.000	0.2449	200	1396742.00	0.1819
1,1,2,2-Tetrachloroethane	50.0	306843.000	0.6188	100	612994.000	0.4964	NA	NA	NA
1,1-Dichloroethane	50.0	803255.000	0.4545	100	1819010.00	0.4729	200	3177501.00	0.4138
Bromoform	50.0	235033.000	0.1715	100	491069.000	0.1683	200	918842.000	0.1465
Chlorobenzene	50.0	1018617.00	0.7431	100	2241462.00	0.7682	200	4390321.00	0.6998
Chloromethane	50.0	706350.000	0.3997	100	1569584.00	0.4080	200	3078222.00	0.4009
1,1,1,2-Tetrachloroethane	50.0	408434.000	0.2980	100	882662.000	0.3025	NA	NA	NA
1,1,1-Trichloroethane	50.0	579114.000	0.3277	100	1335703.00	0.3472	200	2355450.00	0.3068
1,1,2-Trichloroethane	50.0	271102.000	0.1978	100	559618.000	0.1918	NA	NA	NA
1,1-Dichloropropene	50.0	519605.000	0.2940	100	1203619.00	0.3129	200	2151741.00	0.2802
1,2,3-Trichlorobenzene	50.0	439450.000	0.8862	100	993490.000	0.8045	200	2018460.00	0.6776
1,2,3-Trichloropropane	50.0	93774.0000	0.1891	100	190746.000	0.1545	NA	NA	NA
1,2,4-Trichlorobenzene	50.0	427613.000	0.8624	100	987228.000	0.7994	200	2091393.00	0.7021
1,2,4-Trimethylbenzene	50.0	1241658.00	2.504	100	2775026.00	2.247	200	5012151.00	1.683
1,2-Dibromo-3-Chloropropane	50.0	61928.0000	0.1249	100	130743.000	0.1059	200	256844.000	0.08620
1,2-Dibromoethane	50.0	268362.000	0.1958	100	523939.000	0.1796	NA	NA	NA
1,2-Dichlorobenzene	50.0	643024.000	1.297	100	1555334.00	1.260	NA	NA	NA
1,2-Dichloroethane	50.0	528028.000	0.2988	100	1169626.00	0.3041	200	2067950.00	0.2693
1,3,5-Trimethylbenzene	50.0	1409824.00	2.843	100	3031588.00	2.455	NA	NA	NA
1,3-Dichlorobenzene	50.0	642449.000	1.296	100	1616456.00	1.309	200	3429508.00	1.151
1,3-Dichloropropane	50.0	467355.000	0.3409	100	947207.000	0.3246	NA	NA	NA
1,4-Dichlorobenzene	50.0	577078.000	1.164	100	1479404.00	1.198	200	3242118.00	1.088
2,2-Dichloropropane	50.0	568501.000	0.3217	100	1302298.00	0.3386	200	2302408.00	0.2999
2-Butanone	50.0	143467.000	0.08120	100	304541.000	0.07920	200	581268.000	0.07570
2-Chloroethyl Vinyl Ether	50.0	198911.000	0.1126	100	440872.000	0.1146	200	897798.000	0.1169
2-Chlorotoluene	50.0	1162356.00	2.344	100	2586259.00	2.094	200	4871025.00	1.635
2-Hexanone	50.0	199383.000	0.1455	100	408127.000	0.1399	200	823313.000	0.1312
4-Chlorotoluene	50.0	857122.000	1.729	100	2180549.00	1.766	200	4564424.00	1.532
4-Methyl-2-Pentanone	50.0	115312.000	0.06520	100	238672.000	0.06200	200	474624.000	0.06180
Acetone	50.0	92985.0000	0.05260	100	205962.000	0.05350	200	364614.000	0.04750
Benzene	50.0	1505910.00	0.8521	100	3337022.00	0.8675	200	5872630.00	0.7648
Bromobenzene	50.0	427493.000	0.8621	100	937993.000	0.7596	200	1926786.00	0.6468
Bromochloromethane	50.0	189265.000	0.1071	100	430334.000	0.1119	200	749143.000	0.09760
Bromodichloromethane	50.0	469646.000	0.2658	100	1055327.00	0.2744	200	1978771.00	0.2577
Bromomethane	50.0	261442.000	0.1479	100	649442.000	0.1688	200	1240282.00	0.1615
Carbon Disulfide	50.0	1240883.00	0.7022	100	2696693.00	0.7011	200	4527199.00	0.5896
Carbon Tetrachloride	50.0	485424.000	0.2747	100	1123796.00	0.2922	200	1988639.00	0.2590

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Analyte	WG297559-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1,2-Tetrachloroethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,1-Dichloropropene	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA
1,2,4-Trimethylbenzene	NA	NA	NA
1,2-Dibromo-3-Chloropropane	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
1,3,5-Trimethylbenzene	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA
1,3-Dichloropropane	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA
2,2-Dichloropropane	NA	NA	NA
2-Butanone	300	891790.000	0.08070
2-Chloroethyl Vinyl Ether	NA	NA	NA
2-Chlorotoluene	NA	NA	NA
2-Hexanone	300	850457.000	0.1298
4-Chlorotoluene	NA	NA	NA
4-Methyl-2-Pentanone	300	676286.000	0.06120
Acetone	300	525628.000	0.04760
Benzene	NA	NA	NA
Bromobenzene	NA	NA	NA
Bromochloromethane	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA

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Analyte	WG297559-02			WG297559-03			WG297559-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	NA	NA	NA	NA	NA	NA	1.00	3089.00000	0.1046
Dibromochloromethane	NA	NA	NA	0.400	2254.00000	0.3447	1.00	4925.00000	0.3062
Dibromomethane	NA	NA	NA	0.400	1212.00000	0.1043	1.00	3489.00000	0.1181
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	1.00	5897.00000	0.1996
Hexachlorobutadiene	NA	NA	NA	0.400	958.000000	0.4059	1.00	2562.00000	0.4303
Isopropylbenzene	NA	NA	NA	0.400	8778.00000	1.343	1.00	20436.0000	1.271
Methylene Chloride	NA	NA	NA	0.400	8581.00000	0.7387	1.00	13415.0000	0.4542
Naphthalene	NA	NA	NA	0.400	3205.00000	1.358	1.00	6377.00000	1.071
Styrene	NA	NA	NA	NA	NA	NA	1.00	7775.00000	0.4835
Tetrachloroethene	NA	NA	NA	0.400	1770.00000	0.2707	1.00	4245.00000	0.2640
Trichloroethene	NA	NA	NA	0.400	2639.00000	0.2272	1.00	6613.00000	0.2239
Trichlorofluoromethane	NA	NA	NA	0.400	4216.00000	0.3629	1.00	9058.00000	0.3067
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2851.00000	0.2454	1.00	7192.00000	0.2435
cis-1,3-Dichloropropene	NA	NA	NA	0.400	3509.00000	0.3021	1.00	8302.00000	0.2811
m-,p-Xylene	NA	NA	NA	0.800	5632.00000	0.4307	2.00	11900.0000	0.3700
n-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	9829.00000	1.651
n-Propylbenzene	NA	NA	NA	0.400	6215.00000	2.634	1.00	13508.0000	2.269
o-Xylene	NA	NA	NA	NA	NA	NA	1.00	6816.00000	0.4238
p-Isopropyltoluene	NA	NA	NA	NA	NA	NA	1.00	15139.0000	2.543
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	17410.0000	2.924
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	4285.00000	0.7197
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2506.00000	0.2157	1.00	6693.00000	0.2266
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	7174.00000	0.4461

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Column ID: F

Analyte	WG297559-05			WG297559-06			WG297559-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	2.00	7583.00000	0.1255	5.00	20796.0000	0.1309	20.0	83526.0000	0.1244
Dibromochloromethane	2.00	11508.0000	0.3489	5.00	30891.0000	0.3369	20.0	137608.000	0.2855
Dibromomethane	2.00	6927.00000	0.1146	5.00	18763.0000	0.1181	20.0	78492.0000	0.1169
Dichlorodifluoromethane	2.00	14976.0000	0.2479	5.00	38579.0000	0.2428	20.0	159365.000	0.2374
Hexachlorobutadiene	2.00	5571.00000	0.4543	5.00	16981.0000	0.5339	20.0	84203.0000	0.5477
Isopropylbenzene	2.00	39930.0000	1.211	5.00	115346.000	1.258	20.0	562076.000	1.166
Methylene Chloride	2.00	18642.0000	0.3085	5.00	42380.0000	0.2667	20.0	146396.000	0.2181
Naphthalene	2.00	12224.0000	0.9969	5.00	37197.0000	1.169	20.0	217737.000	1.416
Styrene	2.00	15261.0000	0.4627	5.00	43957.0000	0.4794	20.0	259223.000	0.5377
Tetrachloroethene	2.00	9504.00000	0.2881	5.00	25728.0000	0.2806	20.0	130480.000	0.2707
Trichloroethene	2.00	13526.0000	0.2239	5.00	37297.0000	0.2347	20.0	161970.000	0.2413
Trichlorofluoromethane	2.00	23131.0000	0.3828	5.00	59300.0000	0.3732	20.0	242919.000	0.3619
Vinyl Acetate	2.00	35900.0000	0.5941	5.00	95835.0000	0.6031	20.0	294336.000	0.4385
cis-1,2-Dichloroethene	2.00	13973.0000	0.2313	5.00	36900.0000	0.2322	20.0	158622.000	0.2363
cis-1,3-Dichloropropene	2.00	17270.0000	0.2858	5.00	49310.0000	0.3103	20.0	209487.000	0.3121
m-,p-Xylene	4.00	24837.0000	0.3765	10.0	65350.0000	0.3564	40.0	376375.000	0.3904
n-Butylbenzene	2.00	22062.0000	1.799	5.00	54389.0000	1.710	20.0	238553.000	1.552
n-Propylbenzene	2.00	25259.0000	2.060	5.00	65575.0000	2.062	20.0	349035.000	2.270
o-Xylene	2.00	14065.0000	0.4264	5.00	37506.0000	0.4090	20.0	210116.000	0.4359
p-Isopropyltoluene	2.00	32886.0000	2.682	5.00	87167.0000	2.740	20.0	400050.000	2.602
sec-Butylbenzene	2.00	37920.0000	3.092	5.00	104048.000	3.271	20.0	504218.000	3.280
tert-Butylbenzene	2.00	7952.00000	0.6485	5.00	24347.0000	0.7654	20.0	99562.0000	0.6476
trans-1,2-Dichloroethene	2.00	12925.0000	0.2139	5.00	33512.0000	0.2109	20.0	145299.000	0.2165
trans-1,3-Dichloropropene	2.00	15479.0000	0.4693	5.00	40467.0000	0.4413	20.0	185868.000	0.3856

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Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-08			WG297559-09			WG297559-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	50.0	206513.000	0.1169	100	514022.000	0.1336	200	925113.000	0.1205
Dibromochloromethane	50.0	353308.000	0.2577	100	713925.000	0.2447	NA	NA	NA
Dibromomethane	50.0	199907.000	0.1131	100	445320.000	0.1158	200	817443.000	0.1065
Dichlorodifluoromethane	50.0	399973.000	0.2263	100	923781.000	0.2402	200	1633246.00	0.2127
Hexachlorobutadiene	50.0	240534.000	0.4851	100	556239.000	0.4504	200	1132043.00	0.3800
Isopropylbenzene	50.0	1754773.00	1.280	100	3656932.00	1.253	200	6767653.00	1.079
Methylene Chloride	50.0	353244.000	0.1999	100	795663.000	0.2068	NA	NA	NA
Naphthalene	50.0	675620.000	1.363	100	1378729.00	1.117	NA	NA	NA
Styrene	50.0	945498.000	0.6898	100	2279199.00	0.7812	NA	NA	NA
Tetrachloroethene	50.0	334935.000	0.2443	100	785824.000	0.2693	200	1475682.00	0.2352
Trichloroethene	50.0	411484.000	0.2328	100	958795.000	0.2493	200	1764921.00	0.2299
Trichlorofluoromethane	50.0	622383.000	0.3522	100	1365200.00	0.3549	200	2412845.00	0.3142
Vinyl Acetate	50.0	540081.000	0.3056	100	1104768.00	0.2872	200	1806316.00	0.2353
cis-1,2-Dichloroethene	50.0	411821.000	0.2330	100	936428.000	0.2434	200	1670024.00	0.2175
cis-1,3-Dichloropropene	50.0	531287.000	0.3006	100	1149697.00	0.2989	200	2263320.00	0.2948
m-,p-Xylene	100	1283637.00	0.4682	200	2928843.00	0.5019	400	5671213.00	0.4520
n-Butylbenzene	50.0	748338.000	1.509	100	2012828.00	1.630	200	3562919.00	1.196
n-Propylbenzene	50.0	1424532.00	2.873	100	3666084.00	2.969	200	7190902.00	2.414
o-Xylene	50.0	672761.000	0.4908	100	1472355.00	0.5046	200	2982505.00	0.4754
p-Isopropyltoluene	50.0	1146412.00	2.312	100	2642799.00	2.140	200	5059144.00	1.698
sec-Butylbenzene	50.0	1359469.00	2.742	100	3303794.00	2.675	200	6769146.00	2.273
tert-Butylbenzene	50.0	278343.000	0.5613	100	657666.000	0.5326	NA	NA	NA
trans-1,2-Dichloroethene	50.0	381454.000	0.2158	100	855793.000	0.2225	200	1542763.00	0.2009
trans-1,3-Dichloropropene	50.0	465577.000	0.3396	100	948993.000	0.3253	NA	NA	NA

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Analytical Method: 8260BInstrument ID: HPMS10
Initial Calibration Date: 18-MAR-09 15:23
Column ID: F

Analyte	WG297559-11		
	CONC	RESP	RF
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Dibromomethane	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA
Isopropylbenzene	NA	NA	NA
Methylene Chloride	NA	NA	NA
Naphthalene	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA
Vinyl Acetate	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-, p-Xylene	NA	NA	NA
n-Butylbenzene	NA	NA	NA
n-Propylbenzene	NA	NA	NA
o-Xylene	NA	NA	NA
p-Isopropyltoluene	NA	NA	NA
sec-Butylbenzene	NA	NA	NA
tert-Butylbenzene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

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Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-02			WG297666-03			WG297666-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA	0.400	4765.00000	0.4056	1.00	12012.0000	0.3972
1,2-Dichloropropane	NA	NA	NA	0.400	2083.00000	0.1773	1.00	6489.00000	0.2146
Chloroform	0.300	4806.00000	0.4925	0.400	6554.00000	0.5579	1.00	16609.0000	0.5492
Ethylbenzene	NA	NA	NA	0.400	3943.00000	0.3850	1.00	11625.0000	0.4373
Toluene	NA	NA	NA	0.400	11017.0000	1.076	1.00	29078.0000	1.094
Vinyl Chloride	NA	NA	NA	0.400	4796.00000	0.4082	1.00	10937.0000	0.3616
1,1,2,2-Tetrachloroethane	NA	NA	NA	0.400	2063.00000	0.3293	1.00	5927.00000	0.3597
1,1-Dichloroethane	NA	NA	NA	0.400	5385.00000	0.4584	1.00	14185.0000	0.4690
Bromoform	NA	NA	NA	NA	NA	NA	1.00	3506.00000	0.1319
Chlorobenzene	NA	NA	NA	0.400	9211.00000	0.8993	1.00	23929.0000	0.9002
Chloromethane	NA	NA	NA	NA	NA	NA	1.00	11851.0000	0.3919
1,1,1,2-Tetrachloroethane	NA	NA	NA	0.400	3034.00000	0.2962	1.00	8119.00000	0.3054
1,1,1-Trichloroethane	NA	NA	NA	0.400	6021.00000	0.5125	1.00	15778.0000	0.5217
1,1,2-Trichloroethane	NA	NA	NA	0.400	1629.00000	0.1590	1.00	5257.00000	0.1978
1,1-Dichloropropene	NA	NA	NA	0.400	3495.00000	0.2975	1.00	9834.00000	0.3252
1,2,3-Trichlorobenzene	0.300	2213.00000	0.4440	0.400	3361.00000	0.5365	1.00	9028.00000	0.5479
1,2,3-Trichloropropane	NA	NA	NA	NA	NA	NA	1.00	1663.00000	0.1009
1,2,4-Trichlorobenzene	NA	NA	NA	0.400	3878.00000	0.6191	1.00	9683.00000	0.5877
1,2,4-Trimethylbenzene	NA	NA	NA	NA	NA	NA	1.00	29099.0000	1.766
1,2-Dibromo-3-Chloropropane	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA	0.400	1922.00000	0.1876	1.00	5179.00000	0.1948
1,2-Dichlorobenzene	0.300	4700.00000	0.9429	0.400	6857.00000	1.095	1.00	18018.0000	1.094
1,2-Dichloroethane	NA	NA	NA	0.400	5091.00000	0.4333	1.00	12897.0000	0.4264
1,3,5-Trimethylbenzene	NA	NA	NA	0.400	8526.00000	1.361	1.00	25341.0000	1.538
1,3-Dichlorobenzene	NA	NA	NA	0.400	7396.00000	1.181	1.00	19490.0000	1.183
1,3-Dichloropropane	NA	NA	NA	0.400	3533.00000	0.3449	1.00	9553.00000	0.3594
1,4-Dichlorobenzene	0.300	6648.00000	1.334	0.400	8695.00000	1.388	1.00	21030.0000	1.276
2,2-Dichloropropane	NA	NA	NA	0.400	5025.00000	0.4277	1.00	14395.0000	0.4760
2-Butanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chloroethyl Vinyl Ether	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-Chlorotoluene	NA	NA	NA	0.400	11718.0000	1.871	1.00	32484.0000	1.972
2-Hexanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
4-Chlorotoluene	NA	NA	NA	0.400	10312.0000	1.646	1.00	28572.0000	1.734
4-Methyl-2-Pentanone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Acetone	NA	NA	NA	NA	NA	NA	NA	NA	NA
Benzene	NA	NA	NA	0.400	11369.0000	0.9677	1.00	28760.0000	0.9510
Bromobenzene	0.300	2337.00000	0.4689	0.400	3561.00000	0.5685	1.00	9609.00000	0.5832
Bromochloromethane	NA	NA	NA	0.400	1468.00000	0.1250	1.00	4353.00000	0.1439
Bromodichloromethane	NA	NA	NA	0.400	4269.00000	0.3634	1.00	11138.0000	0.3683
Bromomethane	NA	NA	NA	NA	NA	NA	1.00	4889.00000	0.1617
Carbon Disulfide	NA	NA	NA	NA	NA	NA	1.00	22769.0000	0.7529
Carbon Tetrachloride	NA	NA	NA	0.400	5091.00000	0.4333	1.00	14345.0000	0.4743

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Analytical Method: 8260BInstrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-05			WG297666-06			WG297666-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	2.00	25393.0000	0.4226	5.00	63335.0000	0.4004	20.0	296729.000	0.4464
1,2-Dichloropropane	2.00	12643.0000	0.2104	5.00	33065.0000	0.2091	20.0	152553.000	0.2295
Chloroform	2.00	33599.0000	0.5592	5.00	86559.0000	0.5473	20.0	375841.000	0.5654
Ethylbenzene	2.00	23798.0000	0.4566	5.00	59650.0000	0.4333	20.0	287584.000	0.5000
Toluene	2.00	60707.0000	1.165	5.00	160942.000	1.169	20.0	761485.000	1.324
Vinyl Chloride	2.00	20348.0000	0.3386	5.00	44348.0000	0.2804	20.0	195803.000	0.2945
1,1,2,2-Tetrachloroethane	2.00	11131.0000	0.3433	5.00	31812.0000	0.3718	20.0	141927.000	0.3967
1,1-Dichloroethane	2.00	28686.0000	0.4774	5.00	74338.0000	0.4700	20.0	336110.000	0.5056
Bromoform	2.00	7175.00000	0.1377	5.00	21692.0000	0.1576	20.0	110202.000	0.1916
Chlorobenzene	2.00	45297.0000	0.8691	5.00	114501.000	0.8317	20.0	519728.000	0.9037
Chloromethane	2.00	25223.0000	0.4198	5.00	56601.0000	0.3579	20.0	244090.000	0.3672
1,1,1,2-Tetrachloroethane	2.00	14937.0000	0.2866	5.00	42196.0000	0.3065	20.0	199097.000	0.3462
1,1,1-Trichloroethane	2.00	29713.0000	0.4945	5.00	78391.0000	0.4956	20.0	362621.000	0.5455
1,1,2-Trichloroethane	2.00	10257.0000	0.1968	5.00	27709.0000	0.2013	20.0	125039.000	0.2174
1,1-Dichloropropene	2.00	20194.0000	0.3361	5.00	52658.0000	0.3329	20.0	254110.000	0.3822
1,2,3-Trichlorobenzene	2.00	17999.0000	0.5551	5.00	48722.0000	0.5694	20.0	233772.000	0.6534
1,2,3-Trichloropropane	2.00	3870.00000	0.1194	5.00	10625.0000	0.1242	20.0	50345.0000	0.1407
1,2,4-Trichlorobenzene	2.00	19096.0000	0.5889	5.00	51181.0000	0.5982	20.0	260003.000	0.7267
1,2,4-Trimethylbenzene	2.00	65700.0000	2.026	5.00	173426.000	2.027	20.0	824029.000	2.303
1,2-Dibromo-3-Chloropropane	2.00	1927.00000	0.05940	5.00	6309.00000	0.07370	20.0	30916.0000	0.08640
1,2-Dibromoethane	2.00	9523.00000	0.1827	5.00	28769.0000	0.2090	20.0	134122.000	0.2332
1,2-Dichlorobenzene	2.00	35961.0000	1.109	5.00	95616.0000	1.118	20.0	443956.000	1.241
1,2-Dichloroethane	2.00	24474.0000	0.4073	5.00	66677.0000	0.4216	20.0	289231.000	0.4351
1,3,5-Trimethylbenzene	2.00	60452.0000	1.864	5.00	167453.000	1.957	20.0	815909.000	2.281
1,3-Dichlorobenzene	2.00	40739.0000	1.256	5.00	104499.000	1.221	20.0	489727.000	1.369
1,3-Dichloropropane	2.00	17605.0000	0.3378	5.00	48567.0000	0.3528	20.0	222671.000	0.3872
1,4-Dichlorobenzene	2.00	43416.0000	1.339	5.00	111536.000	1.304	20.0	508526.000	1.421
2,2-Dichloropropane	2.00	27489.0000	0.4575	5.00	70962.0000	0.4487	20.0	337916.000	0.5083
2-Butanone	NA	NA	NA	5.00	11652.0000	0.07370	20.0	40964.0000	0.06160
2-Chloroethyl Vinyl Ether	NA	NA	NA	5.00	13329.0000	0.08430	20.0	70567.0000	0.1062
2-Chlorotoluene	2.00	70545.0000	2.176	5.00	185289.000	2.166	20.0	862901.000	2.412
2-Hexanone	NA	NA	NA	5.00	14098.0000	0.1024	20.0	61496.0000	0.1069
4-Chlorotoluene	2.00	61388.0000	1.893	5.00	158404.000	1.851	20.0	741193.000	2.072
4-Methyl-2-Pentanone	NA	NA	NA	5.00	6623.00000	0.04190	20.0	31030.0000	0.04670
Acetone	NA	NA	NA	5.00	8246.00000	0.05210	20.0	36407.0000	0.05480
Benzene	2.00	56215.0000	0.9355	5.00	144197.000	0.9117	20.0	670547.000	1.009
Bromobenzene	2.00	19711.0000	0.6079	5.00	52193.0000	0.6100	20.0	239524.000	0.6695
Bromochloromethane	2.00	8905.00000	0.1482	5.00	25000.0000	0.1581	20.0	109820.000	0.1652
Bromodichloromethane	2.00	21529.0000	0.3583	5.00	58577.0000	0.3704	20.0	272867.000	0.4105
Bromomethane	2.00	12103.0000	0.2014	5.00	27160.0000	0.1717	20.0	129472.000	0.1948
Carbon Disulfide	2.00	48535.0000	0.8077	5.00	127916.000	0.8088	20.0	559429.000	0.8415
Carbon Tetrachloride	2.00	27291.0000	0.4542	5.00	68679.0000	0.4342	20.0	318185.000	0.4786

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Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-08			WG297666-09			WG297666-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
1,1-Dichloroethene	50.0	794754.000	0.4199	100	1700228.00	0.4215	200	3515000.00	0.4053
1,2-Dichloropropane	50.0	421300.000	0.2226	100	937564.000	0.2324	200	1992209.00	0.2297
Chloroform	50.0	1007525.00	0.5323	100	2124705.00	0.5268	200	4352108.00	0.5019
Ethylbenzene	50.0	774809.000	0.4736	100	1659010.00	0.4767	200	3364428.00	0.4439
Toluene	50.0	2049095.00	1.252	100	4307987.00	1.238	200	8356830.00	1.103
Vinyl Chloride	50.0	479217.000	0.2532	100	900434.000	0.2232	NA	NA	NA
1,1,2,2-Tetrachloroethane	50.0	385573.000	0.3767	100	844618.000	0.3863	200	1829474.00	0.3968
1,1-Dichloroethane	50.0	901542.000	0.4763	100	1942999.00	0.4817	200	4100398.00	0.4728
Bromoform	50.0	305732.000	0.1869	100	675675.000	0.1941	200	1467329.00	0.1936
Chlorobenzene	50.0	1398300.00	0.8547	100	2979637.00	0.8561	200	6003701.00	0.7921
Chloromethane	50.0	605459.000	0.3199	100	1235266.00	0.3063	200	2484614.00	0.2865
1,1,1,2-Tetrachloroethane	50.0	539965.000	0.3300	100	1155386.00	0.3320	200	2366524.00	0.3122
1,1,1-Trichloroethane	50.0	972964.000	0.5140	100	2049997.00	0.5082	200	4088858.00	0.4715
1,1,2-Trichloroethane	50.0	336769.000	0.2058	100	733066.000	0.2106	200	1585664.00	0.2092
1,1-Dichloropropene	50.0	698388.000	0.3690	100	1496210.00	0.3709	200	3080526.00	0.3552
1,2,3-Trichlorobenzene	50.0	639353.000	0.6247	100	1394962.00	0.6379	200	2876146.00	0.6238
1,2,3-Trichloropropane	50.0	132722.000	0.1297	100	287971.000	0.1317	200	616942.000	0.1338
1,2,4-Trichlorobenzene	50.0	731246.000	0.7145	100	1594767.00	0.7293	200	3313964.00	0.7187
1,2,4-Trimethylbenzene	50.0	2246394.00	2.195	100	4716372.00	2.157	200	8607927.00	1.867
1,2-Dibromo-3-Chloropropane	50.0	83170.0000	0.08130	100	177934.000	0.08140	200	381264.000	0.08270
1,2-Dibromoethane	50.0	364890.000	0.2230	100	783263.000	0.2251	200	1695184.00	0.2237
1,2-Dichlorobenzene	50.0	1181536.00	1.155	100	2506813.00	1.146	200	5024943.00	1.090
1,2-Dichloroethane	50.0	753713.000	0.3982	100	1558956.00	0.3865	200	3132726.00	0.3613
1,3,5-Trimethylbenzene	50.0	2201995.00	2.152	100	4632325.00	2.118	200	8523889.00	1.849
1,3-Dichlorobenzene	50.0	1310803.00	1.281	100	2785439.00	1.274	200	5530791.00	1.200
1,3-Dichloropropane	50.0	601663.000	0.3677	100	1316409.00	0.3782	200	2809949.00	0.3708
1,4-Dichlorobenzene	50.0	1351048.00	1.320	100	2873245.00	1.314	200	5619967.00	1.219
2,2-Dichloropropane	50.0	922104.000	0.4872	100	1962867.00	0.4866	200	3982622.00	0.4593
2-Butanone	50.0	112603.000	0.05950	100	258334.000	0.06400	200	595354.000	0.06870
2-Chloroethyl Vinyl Ether	50.0	194469.000	0.1027	100	423910.000	0.1051	200	973262.000	0.1122
2-Chlorotoluene	50.0	2265249.00	2.213	100	4812150.00	2.201	200	8698852.00	1.887
2-Hexanone	50.0	174498.000	0.1067	100	391409.000	0.1125	200	876467.000	0.1156
4-Chlorotoluene	50.0	1970282.00	1.925	100	3962014.00	1.812	200	7556527.00	1.639
4-Methyl-2-Pentanone	50.0	93794.0000	0.04960	100	207483.000	0.05140	200	470077.000	0.05420
Acetone	50.0	88043.0000	0.04650	100	186332.000	0.04620	200	401136.000	0.04630
Benzene	50.0	1823494.00	0.9634	100	3902330.00	0.9675	200	7766872.00	0.8957
Bromobenzene	50.0	643755.000	0.6290	100	1368537.00	0.6258	200	2838056.00	0.6155
Bromochloromethane	50.0	297251.000	0.1570	100	633826.000	0.1571	200	1361030.00	0.1570
Bromodichloromethane	50.0	738015.000	0.3899	100	1577051.00	0.3910	200	3281948.00	0.3785
Bromomethane	50.0	377386.000	0.1994	100	821723.000	0.2037	200	1701848.00	0.1963
Carbon Disulfide	50.0	1501626.00	0.7933	100	3252820.00	0.8065	200	6704614.00	0.7732
Carbon Tetrachloride	50.0	856589.000	0.4525	100	1784696.00	0.4425	200	3631513.00	0.4188

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Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-11		
	CONC	RESP	RF
1,1-Dichloroethene	NA	NA	NA
1,2-Dichloropropane	NA	NA	NA
Chloroform	NA	NA	NA
Ethylbenzene	NA	NA	NA
Toluene	NA	NA	NA
Vinyl Chloride	NA	NA	NA
1,1,2,2-Tetrachloroethane	NA	NA	NA
1,1-Dichloroethane	NA	NA	NA
Bromoform	NA	NA	NA
Chlorobenzene	NA	NA	NA
Chloromethane	NA	NA	NA
1,1,1,2-Tetrachloroethane	NA	NA	NA
1,1,1-Trichloroethane	NA	NA	NA
1,1,2-Trichloroethane	NA	NA	NA
1,1-Dichloropropene	NA	NA	NA
1,2,3-Trichlorobenzene	NA	NA	NA
1,2,3-Trichloropropane	NA	NA	NA
1,2,4-Trichlorobenzene	NA	NA	NA
1,2,4-Trimethylbenzene	NA	NA	NA
1,2-Dibromo-3-Chloropropane	NA	NA	NA
1,2-Dibromoethane	NA	NA	NA
1,2-Dichlorobenzene	NA	NA	NA
1,2-Dichloroethane	NA	NA	NA
1,3,5-Trimethylbenzene	NA	NA	NA
1,3-Dichlorobenzene	NA	NA	NA
1,3-Dichloropropane	NA	NA	NA
1,4-Dichlorobenzene	NA	NA	NA
2,2-Dichloropropane	NA	NA	NA
2-Butanone	300	894282.000	0.06680
2-Chloroethyl Vinyl Ether	300	1477742.00	0.1103
2-Chlorotoluene	NA	NA	NA
2-Hexanone	300	1321877.00	0.1190
4-Chlorotoluene	NA	NA	NA
4-Methyl-2-Pentanone	300	717844.000	0.05360
Acetone	300	607882.000	0.04540
Benzene	NA	NA	NA
Bromobenzene	NA	NA	NA
Bromochloromethane	NA	NA	NA
Bromodichloromethane	NA	NA	NA
Bromomethane	NA	NA	NA
Carbon Disulfide	NA	NA	NA
Carbon Tetrachloride	NA	NA	NA

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Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-02			WG297666-03			WG297666-04		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	NA	NA	NA	NA	NA	NA	1.00	5413.00000	0.1790
Dibromochloromethane	NA	NA	NA	0.400	2355.00000	0.2299	1.00	6955.00000	0.2616
Dibromomethane	NA	NA	NA	0.400	1404.00000	0.1195	1.00	4289.00000	0.1418
Dichlorodifluoromethane	NA	NA	NA	NA	NA	NA	1.00	14741.00000	0.4874
Hexachlorobutadiene	NA	NA	NA	0.400	1578.00000	0.2519	1.00	4813.00000	0.2921
Isopropylbenzene	NA	NA	NA	0.400	10088.00000	0.9849	1.00	30554.00000	1.149
Methylene Chloride	NA	NA	NA	0.400	7857.00000	0.6688	1.00	12525.00000	0.4141
Naphthalene	NA	NA	NA	0.400	4070.00000	0.6497	1.00	12314.00000	0.7474
Styrene	NA	NA	NA	0.400	6646.00000	0.6488	1.00	19123.00000	0.7194
Tetrachloroethene	NA	NA	NA	0.400	2941.00000	0.2871	1.00	8743.00000	0.3289
Trichloroethene	NA	NA	NA	0.400	2668.00000	0.2271	1.00	7882.00000	0.2606
Trichlorofluoromethane	NA	NA	NA	0.400	5672.00000	0.4828	1.00	17680.00000	0.5846
Vinyl Acetate	NA	NA	NA	NA	NA	NA	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA	0.400	2755.00000	0.2345	1.00	6836.00000	0.2260
cis-1,3-Dichloropropene	NA	NA	NA	0.400	3332.00000	0.2836	1.00	9866.00000	0.3262
m-,p-Xylene	NA	NA	NA	0.800	10483.00000	0.5117	2.00	28196.00000	0.5303
n-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	22042.00000	1.338
n-Propylbenzene	NA	NA	NA	0.400	13267.00000	2.118	1.00	36470.00000	2.214
o-Xylene	NA	NA	NA	0.400	4261.00000	0.4160	1.00	11681.00000	0.4394
p-Isopropyltoluene	NA	NA	NA	NA	NA	NA	1.00	26095.00000	1.584
sec-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	30226.00000	1.835
tert-Butylbenzene	NA	NA	NA	NA	NA	NA	1.00	5789.00000	0.3514
trans-1,2-Dichloroethene	NA	NA	NA	0.400	2212.00000	0.1883	1.00	7156.00000	0.2366
trans-1,3-Dichloropropene	NA	NA	NA	NA	NA	NA	1.00	9597.00000	0.3610

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Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-05			WG297666-06			WG297666-07		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	2.00	11298.0000	0.1880	5.00	25614.0000	0.1620	20.0	123075.000	0.1851
Dibromochloromethane	2.00	13064.0000	0.2506	5.00	37666.0000	0.2736	20.0	179020.000	0.3113
Dibromomethane	2.00	7975.00000	0.1327	5.00	22265.0000	0.1408	20.0	98928.0000	0.1488
Dichlorodifluoromethane	2.00	31989.0000	0.5324	5.00	68568.0000	0.4335	20.0	313152.000	0.4711
Hexachlorobutadiene	2.00	9957.00000	0.3071	5.00	23960.0000	0.2800	20.0	112621.000	0.3148
Isopropylbenzene	2.00	68790.0000	1.320	5.00	188393.000	1.368	20.0	940468.000	1.635
Methylene Chloride	2.00	23194.0000	0.3860	5.00	46393.0000	0.2933	20.0	186298.000	0.2802
Naphthalene	2.00	24926.0000	0.7687	5.00	74862.0000	0.8749	20.0	396737.000	1.109
Styrene	2.00	43431.0000	0.8333	5.00	123130.000	0.8944	20.0	609095.000	1.059
Tetrachloroethene	2.00	16567.0000	0.3179	5.00	42895.0000	0.3116	20.0	197690.000	0.3437
Trichloroethene	2.00	14089.0000	0.2345	5.00	37204.0000	0.2352	20.0	177374.000	0.2668
Trichlorofluoromethane	2.00	39592.0000	0.6589	5.00	89634.0000	0.5667	20.0	406574.000	0.6116
Vinyl Acetate	NA	NA	NA	5.00	54237.0000	0.3429	20.0	254003.000	0.3821
cis-1,2-Dichloroethene	2.00	15544.0000	0.2587	5.00	39917.0000	0.2524	20.0	187625.000	0.2822
cis-1,3-Dichloropropene	2.00	18828.0000	0.3133	5.00	54305.0000	0.3434	20.0	270786.000	0.4073
m-,p-Xylene	4.00	59601.0000	0.5718	10.0	153946.000	0.5591	40.0	735984.000	0.6399
n-Butylbenzene	2.00	51169.0000	1.578	5.00	132314.000	1.546	20.0	678615.000	1.897
n-Propylbenzene	2.00	88570.0000	2.732	5.00	234163.000	2.737	20.0	1137587.00	3.180
o-Xylene	2.00	25854.0000	0.4960	5.00	70863.0000	0.5147	20.0	350176.000	0.6089
p-Isopropyltoluene	2.00	61487.0000	1.896	5.00	161334.000	1.886	20.0	801903.000	2.241
sec-Butylbenzene	2.00	71251.0000	2.197	5.00	190178.000	2.223	20.0	930174.000	2.600
tert-Butylbenzene	2.00	13054.0000	0.4026	5.00	33915.0000	0.3964	20.0	162722.000	0.4548
trans-1,2-Dichloroethene	2.00	13573.0000	0.2259	5.00	36316.0000	0.2296	20.0	173908.000	0.2616
trans-1,3-Dichloropropene	2.00	19722.0000	0.3784	5.00	55519.0000	0.4033	20.0	276796.000	0.4813

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Login Number: L09030671
Analytical Method: 8260BInstrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-08			WG297666-09			WG297666-10		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloroethane	50.0	337456.000	0.1783	100	742878.000	0.1842	200	1539345.00	0.1775
Dibromochloromethane	50.0	492598.000	0.3011	100	1082979.00	0.3112	200	2332525.00	0.3078
Dibromomethane	50.0	263486.000	0.1392	100	562369.000	0.1394	200	1188941.00	0.1371
Dichlorodifluoromethane	50.0	767384.000	0.4054	100	1581348.00	0.3921	200	3053905.00	0.3522
Hexachlorobutadiene	50.0	300559.000	0.2937	100	664703.000	0.3040	200	1351881.00	0.2932
Isopropylbenzene	50.0	2536525.00	1.550	100	5277329.00	1.516	200	9630691.00	1.271
Methylene Chloride	50.0	490177.000	0.2590	100	1058306.00	0.2624	200	2268112.00	0.2616
Naphthalene	50.0	1141256.00	1.115	100	2525383.00	1.155	200	5275750.00	1.144
Styrene	50.0	1668821.00	1.020	100	3553600.00	1.021	200	6983576.00	0.9214
Tetrachloroethene	50.0	535081.000	0.3270	100	1137665.00	0.3269	200	2344915.00	0.3094
Trichloroethene	50.0	492817.000	0.2604	100	1082783.00	0.2684	200	2268633.00	0.2616
Trichlorofluoromethane	50.0	1048033.00	0.5537	100	2240689.00	0.5555	200	4566972.00	0.5267
Vinyl Acetate	50.0	708278.000	0.3742	100	1579678.00	0.3916	200	3387663.00	0.3907
cis-1,2-Dichloroethene	50.0	510963.000	0.2699	100	1104030.00	0.2737	200	2341333.00	0.2700
cis-1,3-Dichloropropene	50.0	754690.000	0.3987	100	1655621.00	0.4105	200	3509454.00	0.4047
m-,p-Xylene	100	1990421.00	0.6083	200	4188402.00	0.6017	400	7862457.00	0.5187
n-Butylbenzene	50.0	1880075.00	1.837	100	4035081.00	1.845	200	7614594.00	1.651
n-Propylbenzene	50.0	3055991.00	2.986	100	6230804.00	2.849	200	10764533.0	2.335
o-Xylene	50.0	953145.000	0.5826	100	2042713.00	0.5869	200	4126708.00	0.5445
p-Isopropyltoluene	50.0	2197833.00	2.148	100	4679648.00	2.140	200	8645826.00	1.875
sec-Butylbenzene	50.0	2532030.00	2.474	100	5311196.00	2.429	200	9688379.00	2.101
tert-Butylbenzene	50.0	441794.000	0.4317	100	952791.000	0.4357	200	1945809.00	0.4220
trans-1,2-Dichloroethene	50.0	479096.000	0.2531	100	1027509.00	0.2547	200	2207206.00	0.2545
trans-1,3-Dichloropropene	50.0	755054.000	0.4615	100	1621741.00	0.4660	200	3382522.00	0.4463

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Login Number: L09030671
Analytical Method: 8260B

Instrument ID: HPMS6
Initial Calibration Date: 19-MAR-09 14:09
Column ID: F

Analyte	WG297666-11		
	CONC	RESP	RF
Chloroethane	NA	NA	NA
Dibromochloromethane	NA	NA	NA
Dibromomethane	NA	NA	NA
Dichlorodifluoromethane	NA	NA	NA
Hexachlorobutadiene	NA	NA	NA
Isopropylbenzene	NA	NA	NA
Methylene Chloride	NA	NA	NA
Naphthalene	NA	NA	NA
Styrene	NA	NA	NA
Tetrachloroethene	NA	NA	NA
Trichloroethene	NA	NA	NA
Trichlorofluoromethane	NA	NA	NA
Vinyl Acetate	NA	NA	NA
cis-1,2-Dichloroethene	NA	NA	NA
cis-1,3-Dichloropropene	NA	NA	NA
m-, p-Xylene	NA	NA	NA
n-Butylbenzene	NA	NA	NA
n-Propylbenzene	NA	NA	NA
o-Xylene	NA	NA	NA
p-Isopropyltoluene	NA	NA	NA
sec-Butylbenzene	NA	NA	NA
tert-Butylbenzene	NA	NA	NA
trans-1,2-Dichloroethene	NA	NA	NA
trans-1,3-Dichloropropene	NA	NA	NA

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Login Number: L09030671 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
ICal Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	20.0	ug/L	0.395	0.100	30	
1,1-Dichloroethene	CCC	20.0	21.5	ug/L	0.202	7.30	30	
1,2-Dichloropropane	CCC	20.0	20.1	ug/L	0.271	0.300	30	
Ethylbenzene	CCC	20.0	21.9	ug/L	0.394	9.30	30	
Toluene	CCC	20.0	20.8	ug/L	1.18	4.20	30	
Vinyl Chloride	CCC	20.0	19.1	ug/L	0.263	4.60	30	
Bromoform	SPCC	20.0	20.5	ug/L	0.184	2.50	30	
Chlorobenzene	SPCC	20.0	21.2	ug/L	0.782	6.10	30	
Chloromethane	SPCC	20.0	20.3	ug/L	0.419	1.60	30	
1,1-Dichloroethane	SPCC	20.0	20.0	ug/L	0.473	0.100	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	20.5	ug/L	0.740	2.50	30	
Acetone		20.0	19.5	ug/L	0.0517	2.30	30	
Benzene		20.0	20.4	ug/L	0.900	1.80	30	
Bromobenzene		20.0	23.1	ug/L	0.887	15.4	30	
Bromochloromethane		20.0	20.6	ug/L	0.113	2.80	30	
Bromodichloromethane		20.0	21.5	ug/L	0.290	7.60	30	
Bromomethane		20.0	19.7	ug/L	0.169	1.50	30	
2-Butanone		20.0	19.7	ug/L	0.0805	1.30	30	
n-Butylbenzene		20.0	20.7	ug/L	1.63	3.30	30	
sec-Butylbenzene		20.0	23.5	ug/L	3.39	17.3	30	
tert-Butylbenzene		20.0	20.5	ug/L	0.661	2.40	30	
Carbon Disulfide		20.0	19.6	ug/L	0.685	2.10	30	
Carbon Tetrachloride		20.0	21.0	ug/L	0.290	5.20	30	
Dibromochloromethane		20.0	19.3	ug/L	0.293	3.50	30	
Chloroethane		20.0	22.3	ug/L	0.137	11.7	30	
2-Chloroethyl Vinyl Ether		20.0	19.6	ug/L	0.104	2.20	30	
2-Chlorotoluene		20.0	22.0	ug/L	2.31	9.90	30	
4-Chlorotoluene		20.0	22.0	ug/L	1.71	10.0	30	
1,2-Dibromo-3-Chloropropane		20.0	21.0	ug/L	0.135	4.80	30	
1,2-Dibromoethane		20.0	19.7	ug/L	0.222	1.70	30	
Dibromomethane		20.0	20.8	ug/L	0.118	4.20	30	
1,2-Dichlorobenzene		20.0	20.6	ug/L	1.31	3.20	30	
1,3-Dichlorobenzene		20.0	21.6	ug/L	1.27	8.00	30	
1,4-Dichlorobenzene		20.0	19.9	ug/L	1.21	0.500	30	
Dichlorodifluoromethane		20.0	24.1	ug/L	0.276	20.4	30	
1,2-Dichloroethane		20.0	19.8	ug/L	0.301	1.10	30	
cis-1,2-Dichloroethene		20.0	21.3	ug/L	0.250	6.30	30	
trans-1,2-Dichloroethene		20.0	21.2	ug/L	0.229	6.10	30	
1,3-Dichloropropane		20.0	19.2	ug/L	0.390	3.90	30	
2,2-Dichloropropane		20.0	20.2	ug/L	0.341	0.900	30	
cis-1,3-Dichloropropene		20.0	21.0	ug/L	0.314	5.10	30	
trans-1,3-Dichloropropene		20.0	17.3	ug/L	0.347	13.6	30	

ALT - Modified 09/06/2007
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Login Number: L09030671 Run Date: 03/19/2009 Sample ID: WG297559-12
Instrument ID: HPMS10 Run Time: 17:05 Method: 8260B
File ID: 10M71202 Analyst: TMB QC Key: STD
Ical Workgroup: WG297559 Cal ID: HPMS10 - 18-MAR-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
1,1-Dichloropropene	20.0	20.5	ug/L	0.303	2.60	30	
2-Hexanone	20.0	19.4	ug/L	0.128	3.10	30	
Hexachlorobutadiene	20.0	24.5	ug/L	0.566	22.7	30	
Isopropylbenzene	20.0	18.2	ug/L	1.12	9.00	30	
p-Isopropyltoluene	20.0	21.6	ug/L	2.70	8.20	30	
4-Methyl-2-Pentanone	20.0	20.6	ug/L	0.0640	3.10	30	
Methylene Chloride	20.0	21.5	ug/L	0.229	7.60	30	
Naphthalene	20.0	23.3	ug/L	1.41	16.5	30	
n-Propylbenzene	20.0	19.9	ug/L	2.43	0.700	30	
Styrene	20.0	19.7	ug/L	0.587	1.70	30	
1,1,1,2-Tetrachloroethane	20.0	18.4	ug/L	0.333	8.00	30	
Tetrachloroethene	20.0	20.4	ug/L	0.271	2.10	30	
1,2,3-Trichlorobenzene	20.0	21.4	ug/L	0.981	6.80	30	
1,2,4-Trichlorobenzene	20.0	24.7	ug/L	0.931	23.3	30	
1,1,1-Trichloroethane	20.0	20.4	ug/L	0.341	1.80	30	
1,1,2-Trichloroethane	20.0	19.6	ug/L	0.226	2.20	30	
Trichloroethene	20.0	21.1	ug/L	0.245	5.30	30	
Trichlorofluoromethane	20.0	20.9	ug/L	0.367	4.60	30	
1,2,3-Trichloropropane	20.0	21.3	ug/L	0.229	6.30	30	
1,2,4-Trimethylbenzene	20.0	23.5	ug/L	2.81	17.3	30	
1,3,5-Trimethylbenzene	20.0	22.5	ug/L	3.48	12.6	30	
Vinyl Acetate	20.0	14.1	ug/L	0.286	29.4	40	
o-Xylene	20.0	20.9	ug/L	0.473	4.60	30	
m-,p-Xylene	40.0	41.0	ug/L	0.428	2.40	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030671 Run Date: 03/19/2009 Sample ID: WG297666-12
Instrument ID: HPMS6 Run Time: 16:26 Method: 8260B
File ID: 6M82309 Analyst: MES QC Key: STD
ICal Workgroup: WG297666 Cal ID: HPMS6 - 19-MAR-09

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloroform	CCC	20.0	18.7	ug/L	0.502	6.50	30	
1,1-Dichloroethene	CCC	20.0	19.7	ug/L	0.409	1.50	30	
1,2-Dichloropropane	CCC	20.0	20.0	ug/L	0.216	0.200	30	
Ethylbenzene	CCC	20.0	21.0	ug/L	0.473	4.90	30	
Toluene	CCC	20.0	20.9	ug/L	1.23	4.50	30	
Vinyl Chloride	CCC	20.0	18.8	ug/L	0.263	6.00	30	
Bromoform	SPCC	20.0	16.4	ug/L	0.153	18.0	30	
Chlorobenzene	SPCC	20.0	19.6	ug/L	0.847	1.90	30	
Chloromethane	SPCC	20.0	20.5	ug/L	0.358	2.30	30	
1,1-Dichloroethane	SPCC	20.0	19.3	ug/L	0.460	3.50	30	
1,1,2,2-Tetrachloroethane	SPCC	20.0	19.0	ug/L	0.352	5.00	30	
Acetone		20.0	19.4	ug/L	0.0470	3.20	30	
Benzene		20.0	19.6	ug/L	0.933	1.80	30	
Bromobenzene		20.0	21.1	ug/L	0.629	5.30	30	
Bromochloromethane		20.0	20.3	ug/L	0.154	1.60	30	
Bromodichloromethane		20.0	19.1	ug/L	0.363	4.30	30	
Bromomethane		20.0	21.1	ug/L	0.201	5.60	30	
2-Butanone		20.0	17.7	ug/L	0.0581	11.6	30	
n-Butylbenzene		20.0	21.0	ug/L	1.75	4.80	30	
sec-Butylbenzene		20.0	21.6	ug/L	2.44	7.90	30	
tert-Butylbenzene		20.0	20.6	ug/L	0.426	2.90	30	
Carbon Disulfide		20.0	19.7	ug/L	0.786	1.40	30	
Carbon Tetrachloride		20.0	18.4	ug/L	0.413	7.90	30	
Dibromochloromethane		20.0	18.7	ug/L	0.262	6.60	30	
Chloroethane		20.0	21.0	ug/L	0.188	4.90	30	
2-Chloroethyl Vinyl Ether		20.0	19.0	ug/L	0.0985	4.80	30	
2-Chlorotoluene		20.0	21.0	ug/L	2.22	5.20	30	
4-Chlorotoluene		20.0	21.0	ug/L	1.91	4.90	30	
1,2-Dibromo-3-Chloropropane		20.0	18.4	ug/L	0.0711	8.20	30	
1,2-Dibromoethane		20.0	19.2	ug/L	0.202	3.90	30	
Dibromomethane		20.0	18.9	ug/L	0.130	5.50	30	
1,2-Dichlorobenzene		20.0	20.6	ug/L	1.14	2.90	30	
1,3-Dichlorobenzene		20.0	20.1	ug/L	1.25	0.600	30	
1,4-Dichlorobenzene		20.0	19.5	ug/L	1.29	2.50	30	
Dichlorodifluoromethane		20.0	22.0	ug/L	0.482	9.80	30	
1,2-Dichloroethane		20.0	17.6	ug/L	0.360	11.8	30	
cis-1,2-Dichloroethene		20.0	20.7	ug/L	0.267	3.30	30	
trans-1,2-Dichloroethene		20.0	20.2	ug/L	0.240	0.800	30	
1,3-Dichloropropane		20.0	18.9	ug/L	0.342	5.70	30	
2,2-Dichloropropane		20.0	18.7	ug/L	0.438	6.60	30	
cis-1,3-Dichloropropene		20.0	19.9	ug/L	0.359	0.400	30	
trans-1,3-Dichloropropene		20.0	17.0	ug/L	0.364	15.0	30	

ALT - Modified 09/06/2007
Version 1.5 PDF File ID: 1359453
Report generated 04/06/2009 15:06



Login Number: L09030671 Run Date: 03/19/2009 Sample ID: WG297666-12
Instrument ID: HPMS6 Run Time: 16:26 Method: 8260B
File ID: 6M82309 Analyst: MES QC Key: STD
ICal Workgroup: WG297666 Cal ID: HPMS6 - 19-MAR-09

Analyte	Expected	Found	Units	RF	%D	UCL	Q
1,1-Dichloropropene	20.0	19.8	ug/L	0.343	1.10	30	
2-Hexanone	20.0	17.8	ug/L	0.0981	11.2	30	
Hexachlorobutadiene	20.0	19.5	ug/L	0.285	2.30	30	
Isopropylbenzene	20.0	16.4	ug/L	1.34	17.8	30	
p-Isopropyltoluene	20.0	20.7	ug/L	2.04	3.70	30	
4-Methyl-2-Pentanone	20.0	18.6	ug/L	0.0462	6.80	30	
Methylene Chloride	20.0	19.9	ug/L	0.268	0.700	30	
Naphthalene	20.0	18.1	ug/L	1.01	9.30	30	
n-Propylbenzene	20.0	22.5	ug/L	2.97	12.4	30	
Styrene	20.0	18.6	ug/L	0.983	6.80	30	
1,1,1,2-Tetrachloroethane	20.0	19.5	ug/L	0.306	2.70	30	
Tetrachloroethene	20.0	19.7	ug/L	0.315	1.30	30	
1,2,3-Trichlorobenzene	20.0	20.4	ug/L	0.588	1.90	30	
1,2,4-Trichlorobenzene	20.0	20.4	ug/L	0.674	2.10	30	
1,1,1-Trichloroethane	20.0	18.5	ug/L	0.471	7.30	30	
1,1,2-Trichloroethane	20.0	19.3	ug/L	0.193	3.50	30	
Trichloroethene	20.0	19.7	ug/L	0.248	1.70	30	
Trichlorofluoromethane	20.0	18.9	ug/L	0.537	5.30	30	
1,2,3-Trichloropropane	20.0	20.1	ug/L	0.126	0.500	30	
1,2,4-Trimethylbenzene	20.0	21.3	ug/L	2.18	6.50	30	
1,3,5-Trimethylbenzene	20.0	18.9	ug/L	2.13	5.50	30	
Vinyl Acetate	20.0	13.1	ug/L	0.247	34.5	40	
o-Xylene	20.0	21.7	ug/L	0.569	8.60	30	
m-,p-Xylene	40.0	42.3	ug/L	0.601	5.80	30	

* Exceeds %D Limit

CCC Calibration Check Compounds
SPCC System Performance Check Compounds

Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298624-02
Instrument ID: HPMS10 Run Time: 11:08 Method: 8260B
File ID: 10M71460 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298625 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	49.5	ug/L	0.392	0.909	20	
1,1-Dichloroethene	CCC	50.0	50.5	ug/L	0.190	1.07	20	
1,2-Dichloropropane	CCC	50.0	50.6	ug/L	0.273	1.12	20	
Ethylbenzene	CCC	50.0	59.6	ug/L	0.430	19.2	20	
Toluene	CCC	50.0	52.0	ug/L	1.18	3.92	20	
Vinyl Chloride	CCC	50.0	53.0	ug/L	0.277	5.98	20	
Bromoform	SPCC	50.0	54.5	ug/L	0.196	9.00	40	
Chlorobenzene	SPCC	50.0	53.4	ug/L	0.789	6.89	40	
Chloromethane	SPCC	50.0	49.5	ug/L	0.409	0.983	40	
1,1-Dichloroethane	SPCC	50.0	50.4	ug/L	0.476	0.732	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	47.6	ug/L	0.610	4.88	40	
Acetone		50.0	49.9	ug/L	0.0528	0.221	40	
Benzene		50.0	50.1	ug/L	0.886	0.291	40	
Bromobenzene		50.0	54.1	ug/L	0.832	8.22	40	
Bromochloromethane		50.0	50.9	ug/L	0.112	1.80	40	
Bromodichloromethane		50.0	53.1	ug/L	0.286	6.10	40	
Bromomethane		50.0	50.1	ug/L	0.172	0.296	40	
2-Butanone		50.0	55.3	ug/L	0.0902	10.7	40	
n-Butylbenzene		50.0	59.1	ug/L	1.86	18.2	40	
sec-Butylbenzene		50.0	45.6	ug/L	2.64	8.74	40	
tert-Butylbenzene		50.0	40.4	ug/L	0.521	19.3	40	
Carbon Disulfide		50.0	51.2	ug/L	0.716	2.32	40	
Carbon Tetrachloride		50.0	49.4	ug/L	0.273	1.24	40	
Dibromochloromethane		50.0	48.2	ug/L	0.293	3.52	40	
Chloroethane		50.0	43.7	ug/L	0.107	12.6	40	
2-Chloroethyl Vinyl Ether		50.0	47.4	ug/L	0.106	5.30	40	
2-Chlorotoluene		50.0	57.6	ug/L	2.42	15.2	40	
4-Chlorotoluene		50.0	54.5	ug/L	1.69	9.06	40	
1,2-Dibromo-3-Chloropropane		50.0	48.6	ug/L	0.117	2.85	40	
1,2-Dibromoethane		50.0	47.0	ug/L	0.212	5.95	40	
Dibromomethane		50.0	52.5	ug/L	0.119	5.09	40	
1,2-Dichlorobenzene		50.0	55.2	ug/L	1.40	10.3	40	
1,3-Dichlorobenzene		50.0	58.7	ug/L	1.38	17.4	40	
1,4-Dichlorobenzene		50.0	51.9	ug/L	1.26	3.80	40	
Dichlorodifluoromethane		50.0	49.0	ug/L	0.225	2.00	40	
1,2-Dichloroethane		50.0	51.3	ug/L	0.313	2.65	40	
cis-1,2-Dichloroethene		50.0	50.8	ug/L	0.239	1.53	40	
trans-1,2-Dichloroethene		50.0	50.7	ug/L	0.218	1.33	40	
1,3-Dichloropropane		50.0	46.6	ug/L	0.378	6.86	40	
2,2-Dichloropropane		50.0	47.5	ug/L	0.321	5.05	40	
cis-1,3-Dichloropropene		50.0	48.8	ug/L	0.291	2.45	40	
trans-1,3-Dichloropropene		50.0	45.4	ug/L	0.364	9.28	40	

CCV - Modified 03/05/2008
PDF File ID: 1359455
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Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298624-02
Instrument ID: HPMS10 Run Time: 11:08 Method: 8260B
File ID: 10M71460 Analyst: TMB QC Key: STD
Workgroup (AAB#): WG298625 Cal ID: HPMS10 - 18-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	52.6	ug/L	0.311	5.12	40	
2-Hexanone	50.0	67.1	ug/L	0.177	34.2	40	
Hexachlorobutadiene	50.0	51.2	ug/L	0.472	2.36	40	
Isopropylbenzene	50.0	53.4	ug/L	1.32	6.77	40	
p-Isopropyltoluene	50.0	52.6	ug/L	2.46	5.25	40	
4-Methyl-2-Pentanone	50.0	57.8	ug/L	0.0717	15.6	40	
Methylene Chloride	50.0	49.7	ug/L	0.206	0.624	40	
Naphthalene	50.0	53.7	ug/L	1.30	7.34	40	
n-Propylbenzene	50.0	58.7	ug/L	2.87	17.5	40	
Styrene	50.0	54.9	ug/L	0.752	9.72	40	
1,1,1,2-Tetrachloroethane	50.0	46.4	ug/L	0.336	7.29	40	
Tetrachloroethene	50.0	50.6	ug/L	0.269	1.30	40	
1,2,3-Trichlorobenzene	50.0	47.5	ug/L	0.838	4.96	40	
1,2,4-Trichlorobenzene	50.0	61.1	ug/L	0.922	22.1	40	
1,1,1-Trichloroethane	50.0	51.2	ug/L	0.344	2.44	40	
1,1,2-Trichloroethane	50.0	48.2	ug/L	0.223	3.54	40	
Trichloroethene	50.0	53.0	ug/L	0.247	5.96	40	
Trichlorofluoromethane	50.0	50.1	ug/L	0.352	0.249	40	
1,2,3-Trichloropropane	50.0	47.4	ug/L	0.184	5.16	40	
1,2,4-Trimethylbenzene	50.0	58.0	ug/L	2.78	16.0	40	
1,3,5-Trimethylbenzene	50.0	47.2	ug/L	2.92	5.55	40	
Vinyl Acetate	50.0	41.8	ug/L	0.276	16.4	40	
o-Xylene	50.0	57.8	ug/L	0.522	15.5	40	
m-,p-Xylene	100	119	ug/L	0.498	19.1	40	
1,2-Dichloroethene	100	101	ug/L	0.229	1.43	40	
Xylenes	150	177	ug/L	0.510	17.9	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298811-02
Instrument ID: HPMS6 Run Time: 17:10 Method: 8260B
File ID: 6M82571 Analyst: FJB QC Key: STD
Workgroup (AAB#): WG298812 Cal ID: HPMS6 - 19-MAR-09
Matrix: WATER

Analyte		Expected	Found	UNITS	RF	%D	UCL	Q
Chloroform	CCC	50.0	53.1	ug/L	0.570	6.16	20	
1,1-Dichloroethene	CCC	50.0	53.4	ug/L	0.443	6.72	20	
1,2-Dichloropropane	CCC	50.0	53.4	ug/L	0.230	6.76	20	
Ethylbenzene	CCC	50.0	51.1	ug/L	0.461	2.17	20	
Toluene	CCC	50.0	51.8	ug/L	1.22	3.58	20	
Vinyl Chloride	CCC	50.0	54.8	ug/L	0.278	9.65	20	
Bromoform	SPCC	50.0	50.3	ug/L	0.193	0.693	40	
Chlorobenzene	SPCC	50.0	48.4	ug/L	0.836	3.17	40	
Chloromethane	SPCC	50.0	48.2	ug/L	0.337	3.67	40	
1,1-Dichloroethane	SPCC	50.0	53.3	ug/L	0.508	6.62	40	
1,1,2,2-Tetrachloroethane	SPCC	50.0	47.4	ug/L	0.351	5.12	40	
Acetone		50.0	45.7	ug/L	0.0444	8.60	40	
Benzene		50.0	51.9	ug/L	0.986	3.77	40	
Bromobenzene		50.0	50.3	ug/L	0.601	0.548	40	
Bromochloromethane		50.0	53.6	ug/L	0.162	7.18	40	
Bromodichloromethane		50.0	56.2	ug/L	0.425	12.3	40	
Bromomethane		50.0	55.7	ug/L	0.212	11.5	40	
2-Butanone		50.0	42.5	ug/L	0.0559	14.9	40	
n-Butylbenzene		50.0	55.9	ug/L	1.87	11.8	40	
sec-Butylbenzene		50.0	54.0	ug/L	2.45	8.04	40	
tert-Butylbenzene		50.0	50.7	ug/L	0.420	1.44	40	
Carbon Disulfide		50.0	55.0	ug/L	0.878	10.0	40	
Carbon Tetrachloride		50.0	56.5	ug/L	0.507	13.0	40	
Dibromochloromethane		50.0	55.2	ug/L	0.310	10.5	40	
Chloroethane		50.0	51.2	ug/L	0.183	2.39	40	
2-Chloroethyl Vinyl Ether		50.0	49.2	ug/L	0.102	1.69	40	
2-Chlorotoluene		50.0	50.6	ug/L	2.14	1.15	40	
4-Chlorotoluene		50.0	50.0	ug/L	1.82	0.00920	40	
1,2-Dibromo-3-Chloropropane		50.0	50.8	ug/L	0.0787	1.53	40	
1,2-Dibromoethane		50.0	52.0	ug/L	0.218	3.90	40	
Dibromomethane		50.0	53.8	ug/L	0.148	7.64	40	
1,2-Dichlorobenzene		50.0	49.8	ug/L	1.11	0.304	40	
1,3-Dichlorobenzene		50.0	49.4	ug/L	1.23	1.15	40	
1,4-Dichlorobenzene		50.0	48.2	ug/L	1.28	3.62	40	
Dichlorodifluoromethane		50.0	53.0	ug/L	0.466	6.06	40	
1,2-Dichloroethane		50.0	53.3	ug/L	0.436	6.65	40	
cis-1,2-Dichloroethene		50.0	54.0	ug/L	0.279	7.98	40	
trans-1,2-Dichloroethene		50.0	54.5	ug/L	0.259	8.98	40	
1,3-Dichloropropane		50.0	50.6	ug/L	0.366	1.11	40	
2,2-Dichloropropane		50.0	55.0	ug/L	0.516	10.0	40	
cis-1,3-Dichloropropene		50.0	57.9	ug/L	0.418	15.8	40	
trans-1,3-Dichloropropene		50.0	54.7	ug/L	0.468	9.31	40	

CCV - Modified 03/05/2008
PDF File ID: 1359455
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Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298811-02
Instrument ID: HPMS6 Run Time: 17:10 Method: 8260B
File ID: 6M82571 Analyst: FJB QC Key: STD
Workgroup (AAB#): WG298812 Cal ID: HPMS6 - 19-MAR-09
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
1,1-Dichloropropene	50.0	55.2	ug/L	0.382	10.4	40	
2-Hexanone	50.0	49.9	ug/L	0.110	0.108	40	
Hexachlorobutadiene	50.0	54.9	ug/L	0.321	9.85	40	
Isopropylbenzene	50.0	47.8	ug/L	1.53	4.50	40	
p-Isopropyltoluene	50.0	54.0	ug/L	2.13	8.07	40	
4-Methyl-2-Pentanone	50.0	51.5	ug/L	0.0510	2.94	40	
Methylene Chloride	50.0	49.3	ug/L	0.261	1.39	40	
Naphthalene	50.0	46.7	ug/L	1.06	6.63	40	
n-Propylbenzene	50.0	54.1	ug/L	2.86	8.14	40	
Styrene	50.0	47.7	ug/L	1.00	4.51	40	
1,1,1,2-Tetrachloroethane	50.0	53.0	ug/L	0.333	5.98	40	
Tetrachloroethene	50.0	50.7	ug/L	0.324	1.40	40	
1,2,3-Trichlorobenzene	50.0	52.6	ug/L	0.607	5.25	40	
1,2,4-Trichlorobenzene	50.0	53.0	ug/L	0.701	6.07	40	
1,1,1-Trichloroethane	50.0	55.1	ug/L	0.560	10.1	40	
1,1,2-Trichloroethane	50.0	51.2	ug/L	0.205	2.42	40	
Trichloroethene	50.0	53.1	ug/L	0.267	6.19	40	
Trichlorofluoromethane	50.0	56.1	ug/L	0.636	12.1	40	
1,2,3-Trichloropropane	50.0	50.1	ug/L	0.126	0.274	40	
1,2,4-Trimethylbenzene	50.0	51.5	ug/L	2.11	3.06	40	
1,3,5-Trimethylbenzene	50.0	46.9	ug/L	2.08	6.23	40	
Vinyl Acetate	50.0	48.4	ug/L	0.364	3.22	40	
o-Xylene	50.0	55.2	ug/L	0.578	10.4	40	
m-,p-Xylene	100	104	ug/L	0.590	3.99	40	
1,2-Dichloroethene	100	108	ug/L	0.269	8.48	40	
Xylenes	150	159	ug/L	0.584	6.13	40	

* Exceeds %D Criteria

CCC Calibration Check Compounds

SPCC System Performance Check Compounds

Login Number: L09030671
Instrument ID: HPMS10
Workgroup (AAB#): WG298625

CCV Number: WG298624-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298624-02	NA	NA	274941	690464	952817
Upper Limit	NA	NA	549882	1380928	1905634
Lower Limit	NA	NA	137471	345232	476409
<u>L09030671-01</u>	<u>500</u>	<u>DL01</u>	<u>174468</u>	<u>423080</u>	<u>753175</u>
WG298625-01	1.00	01	193868	487777	832823
WG298625-02	1.00	01	222287	644999	893446
WG298625-03	1.00	01	221496	640292	905015

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030671
Instrument ID: HPMS6
Workgroup (AAB#): WG298812

CCV Number: WG298811-02
CAL ID: HPMS6 - 19-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298811-02	NA	NA	503489	773587	836976
Upper Limit	NA	NA	1006978	1547174	1673952
Lower Limit	NA	NA	251745	386794	418488
<u>L09030671-02</u>	<u>1.00</u>	<u>02</u>	<u>383867</u>	<u>615660</u>	<u>645895</u>
WG298812-01	1.00	01	399583	649849	690008
WG298812-02	1.00	01	471767	719798	773208
WG298812-03	1.00	01	346821	554702	582408
WG298812-04	1.00	01	421673	634385	646563
WG298812-05	1.00	01	453659	702068	727720
WG298812-06	1.00	01	317050	512063	531684

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030671
Instrument ID: HPMS10
Workgroup (AAB#): WG298625

CCV Number: WG298624-02
CAL ID: HPMS10 - 18-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298624-02	NA	NA	17.46	14.45	10.6
Upper Limit	NA	NA	17.96	14.95	11.1
Lower Limit	NA	NA	16.96	13.95	10.1
L09030671-01	500	DL01	17.46	14.45	10.6
WG298625-01	1.00	01	17.46	14.45	10.6
WG298625-02	1.00	01	17.46	14.45	10.6
WG298625-03	1.00	01	17.46	14.45	10.59

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

Login Number: L09030671
Instrument ID: HPMS6
Workgroup (AAB#): WG298812

CCV Number: WG298811-02
CAL ID: HPMS6 - 19-MAR-09
Matrix: WATER

Sample Number	Dilution	Tag	IS-1	IS-2	IS-3
WG298811-02	NA	NA	18.62	15.07	10.6
Upper Limit	NA	NA	19.12	15.57	11.1
Lower Limit	NA	NA	18.12	14.57	10.1
L09030671-02	1.00	02	18.62	15.07	10.6
WG298812-01	1.00	01	18.62	15.07	10.6
WG298812-02	1.00	01	18.62	15.06	10.6
WG298812-03	1.00	01	18.62	15.07	10.6
WG298812-04	1.00	01	18.63	15.07	10.6
WG298812-05	1.00	01	18.62	15.07	10.6
WG298812-06	1.00	01	18.62	15.07	10.6

IS-1 - 1,4-Dichlorobenzene-d4
IS-2 - Chlorobenzene-d5
IS-3 - Fluorobenzene

Underline = Response outside limits

2.2 General Chemistry Data

2.2.1 Method 9056

2.2.1.1 Summary Data

LABORATORY REPORT

00087894

L09030671

04/06/09 15:34

Submitted By

Microbac Laboratories Inc.
158 Starlite Drive
Marietta, OH 45750
(740) 373-4071

For

Account Name: Shaw E & I, Inc.
ABB Lummus Building
3010 Briarpark Drive Suite 4N
Houston, TX 77042
Attention: Jennifer Hoang

Project Number: 2773.025

Project: Longhorn AAP

Site: LHAAP-16

P.O. Number: 389869/ 390836 (GWTP)

Sample Analysis Summary

Client ID	Lab ID	Method	Dilution	Date Received
16WW36-033009	L09030671-01	300.0	50	31-MAR-09
16WW28-033009	L09030671-02	300.0	15	31-MAR-09



Report Number: **L09030671**Report Date : **April 6, 2009**

00087895

Sample Number: **L09030671-01**
Client ID: **16WW36-033009**
Matrix: **Water**
Workgroup Number: **WG298726**
Collect Date: **03/30/2009 08:00**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **HAV**
Dilution: **50**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/31/2009 16:07**
Cal Date: **10/29/2008 15:17**
Run Date: **03/31/2009 17:34**
File ID: **I20331091734.08**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	889		10.0	5.00

Report Number: **L09030671**Report Date : **April 6, 2009**

00087896

Sample Number: **L09030671-02**
Client ID: **16WW28-033009**
Matrix: **Water**
Workgroup Number: **WG298726**
Collect Date: **03/30/2009 16:20**
Sample Tag: **DL01**

PrePrep Method: **NONE**
Prep Method: **300.0**
Analytical Method: **300.0**
Analyst: **HAV**
Dilution: **15**
Units: **mg/L**

Instrument: **IC2**
Prep Date: **03/31/2009 16:07**
Cal Date: **10/29/2008 15:17**
Run Date: **04/01/2009 11:08**
File ID: **I20401091108.28**

Analyte	CAS. Number	Result	Qual	PQL	SDL
Chloride	16887-00-6	310		3.00	1.50

2 of 2



2.2.1.2 QC Summary Data

The concentrations (ppm) of the calibration standards and the resulting area counts are used to determine the equation of a linear or quadratic plot.

The slope and y-intercept of that line are used to calculate the quantity of the analyzed unknown samples.

$\text{Amount(ppm)} = [(\text{slope})(\text{area count of unknown}) + \text{y-intercept}](\text{dilution})$

(The slope is the amt/area also identified as the CF or calibration factor)

Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 102908 HICAL IC2.SEQ
 Analyst1: JWR Analyst2: NA
 Method: 9056/300 SOP: IC1 Rev: 8

Maintenance Log ID: 26395

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG286387 (ICAL) WG286492
 Internal STD: NA Surrogate STD: NA Calibration STD: STD29498

Comments: Samples 0005-01 (MDL-Q) and 0006-01 (MDL-Q) were analyzed at two different levels of concentration each. One level is equal to the RL's for F, Cl, Br, SO4, whereas the other level is nearest to the RL's for NO2-N, NO3-N, and PO4-P.

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I21029081332.01	WG286387-01 STD \#1	1	1		10/29/08 13:32
2	I21029081350.02	WG286387-02 STD \#2	1	1		10/29/08 13:50
3	I21029081407.03	WG286387-03 STD \#3	1	1		10/29/08 14:07
4	I21029081424.04	WG286387-04 STD \#4	1	1		10/29/08 14:24
5	I21029081442.05	WG286387-05 STD \#5	1	1		10/29/08 14:42
6	I21029081459.06	WG286387-06 STD \#6	1	1		10/29/08 14:59
7	I21029081517.07	WG286387-07 STD \#7	1	1		10/29/08 15:17
8	I21029081534.08	WG286387-08 ALT STD	1	1		10/29/08 15:34
9	I21029081551.09	ELUENT	1	1		10/29/08 15:51
10	I21029081609.10	DI WATER	1	1		10/29/08 16:09
11	I21029081626.11	WG286496-01 ANION CCV	1	1		10/29/08 16:26
12	I21029081644.12	WG286496-02 ANION CCB	1	1		10/29/08 16:44
13	I21029081701.13	WG286492-01 ANION BLANK	1	1		10/29/08 17:01
14	I21029081718.14	WG286492-02 ANION LCS	1	1		10/29/08 17:18
15	I21029081736.15	L08100005-01 MDL (F, Cl, Br, SO4)	1	1		10/29/08 17:36
16	I21029081753.16	L08100006-01 MDL (F, Cl, Br, SO4)	1	1		10/29/08 17:53
17	I21029081811.17	L08100005-01 MDL (NO2, NO3, PO4)	1	1		10/29/08 18:11
18	I21029081828.18	L08100006-01 MDL (NO2, NO3, PO4)	1	1		10/29/08 18:28
19	I21029081846.19	Test (Level \#5) CCV	1	1		10/29/08 18:46
20	I21029081903.20	Test (Level \#5) CCV	1	1		10/29/08 19:03
21	I21029081920.21	WG286496-03 ANION CCV	1	1		10/29/08 19:20
22	I21029081938.22	WG286496-04 ANION CCB	1	1		10/29/08 19:38
23	I21029081955.23	END	1	1		10/29/08 19:55

Comments

Seq.	Rerun	Dil.	Reason	Analytes



Microbac Laboratories Inc.
Instrument Run Log

Instrument: IC2 Dataset: 033109 IC2.SEQ
 Analyst1: HAV Analyst2: JWR
 Method: 9056/300 SOP: IC1 Rev: 9

Maintenance Log ID: 28188

Column 1 ID: AS14A-4MM Column 2 ID: NA
 Workgroups: WG298726
 Internal STD: NA Surrogate STD: NA Calibration STD: NA

Comments:

Seq.	File ID	Sample Information	Mat	Dil	Reference	Date/Time
1	I20331091532.01	ELUENT	1	1		03/31/09 15:32
2	I20331091550.02	DI WATER	1	1		03/31/09 15:50
3	I20331091607.03	WG298670-01 ANION CCV	1	1		03/31/09 16:07
4	I20331091624.04	WG298670-02 ANION CCB	1	1		03/31/09 16:24
5	I20331091642.05	WG298726-01 ANION BLANK	1	1		03/31/09 16:42
6	I20331091659.06	WG298726-02 ANION LCS	1	1		03/31/09 16:59
7	I20331091717.07	WG298726-07 ANION LCS P&A	1	1		03/31/09 17:17
8	I20331091734.08	L09030671-01 (CL) 1/50	1	50		03/31/09 17:34
9	I20331091751.09	L09030671-02 (CL) 1/3	1	3		03/31/09 17:51
10	I20331091809.10	L09030568-01 (CL, SO4) 1/5 REF	1	5		03/31/09 18:09
11	I20331091826.11	WG298726-04 DUP 0568-01 (1/5)	1	5		03/31/09 18:26
12	I20331091844.12	WG298726-05 MS 0568-01 (1/5)	1	5		03/31/09 18:44
13	I20331091901.13	WG298726-06 MSD 0568-01 (1/5)	1	5		03/31/09 19:01
14	I20331091918.14	DI WATER	1	1		03/31/09 19:18
15	I20331091936.15	WG298670-03 ANION CCV	1	1		03/31/09 19:36
16	I20331091953.16	WG298670-04 ANION CCB	1	1		03/31/09 19:53
17	I20331092011.17	L09030568-05 (CL, SO4)	1	1		03/31/09 20:11
18	I20331092028.18	L09030568-03 (CL, SO4) 1/50	1	50		03/31/09 20:28
19	I20331092046.19	DI WATER	1	1		03/31/09 20:46
20	I20331092103.20	DI WATER	1	1		03/31/09 21:03
21	I20331092120.21	WG298726-08 ANION LCS P&A	1	1		03/31/09 21:20
22	I20331092138.22	WG298726-09 ANION LCS P&A	1	1		03/31/09 21:38
23	I20331092155.23	WG298670-05 ANION CCV	1	1		03/31/09 21:55
24	I20331092213.24	WG298670-06 ANION CCB	1	1		03/31/09 22:13
25	I20331092230.25	END	1	1		03/31/09 22:30
26	I20401091034.26	WG298670-07 ANION CCV	1	1		04/01/09 10:34
27	I20401091051.27	WG298670-08 ANION CCB	1	1		04/01/09 10:51
28	I20401091108.28	L09030671-02 RR CL 1/15	1	15		04/01/09 11:08
29	I20401091126.29	WG298670-09 ANION CCV	1	1		04/01/09 11:26
30	I20401091143.30	WG298670-10 ANION CCB	1	1		04/01/09 11:43
31	I20401091201.31	END	1	1		04/01/09 12:01

Comments

Seq.	Rerun	Dil.	Reason	Analytes

Eri C. Zimm



Microbac Laboratories Inc.

Data Checklist

Date: 29-OCT-2008

Analyst: JWR

Analyst: NA

Method: 300/9056

Instrument: IC2

Curve Workgroup: WG286387

Runlog ID: 24978

Analytical Workgroups: 10-0005 (MDL-Q), 0006 (MDL-Q)

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	X
Average RF	NA
Linear regression or higher order curve	X
Alternate source standard (ICV) % Difference	X
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	NA
Recoveries	NA
%RPD	NA
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	NA
Reruns	NA
Manual integrations	X
Project/client specific requirements	NA
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	NA
Check for completeness	X
Primary Reviewer	JWR
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	MDC

Primary Reviewer:
30-OCT-2008



Secondary Reviewer:
03-NOV-2008



Microbac Laboratories Inc.

Data Checklist

Date: 31-MAR-2009

Analyst: HAV

Analyst: JWR

Method: 300/9056

Instrument: IC2

Curve Workgroup: NA

Runlog ID: 27340

Analytical Workgroups: L09030568, L09030671

ANALYTICAL	
System Performance Check	X
DFTPP (MS)	NA
Endrin/DDT breakdown (8081/MS)	NA
Pentachlorophenol/benzidine tailing (MS)	NA
Eluent check (IC)/system pressure (HPLC)	X
Window standard (FID)	NA
Initial Calibration	NA
Average RF	NA
Linear regression or higher order curve	NA
Alternate source standard (ICV) % Difference	NA
Continuing Calibration (CCV)	X
% D/% Drift	X
Minimum response factors (MS)	NA
Continuing calibration blank (CCB) (IC)	X
Special standards	NA
Blanks	X
TCL hits	X
Surrogate recoveries	NA
LCS/LCSD (Laboratory Control Sample)	X
Recoveries	X
Surrogate recoveries	NA
MS/MSD/Sample duplicates	X
Recoveries	X
%RPD	X
Samples	X
TCL hits	X
Mass spectra (MS/HPLC)/2nd column confirmations (ECD/FID/HPLC)	NA
Surrogate recoveries	NA
Internal standard areas (MS)	NA
Library searches (MS)	NA
Calculations & correct factors	X
Compounds above calibration range	X
Reruns	X
Manual Integrations	X
Project/client specific requirements	X
REPORTING	
Upload batch form	X
KOBRA workgroup data/forms/bench sheets	X
Case narratives	X
Check for completeness	X
Primary Reviewer	HAV
SUPERVISORY/SECONDARY REVIEW	
Check for compliance with method and project specific requirements	X
Check the completeness/accuracy of reported information	X
Data qualifiers	X
Secondary Reviewer	ECL

Primary Reviewer:
01-APR-2009

Hema Velasquez

Secondary Reviewer:
01-APR-2009

Erin C. Zimm

Analytical Method: 300.0
Login Number: L09030671

AAB#: WG298726

Client ID	Date Collected	Date Received	Date Extracted	Max Hold Time Ext.	Time Held Ext.	Date Analyzed	Max Hold Time Anal	Time Held Anal.	Q
16WW36-033009	03/30/09	03/31/09	03/31/09	28	1.34	03/31/09	28	0.0604	
16WW28-033009	03/30/09	03/31/09	03/31/09	28	0.991	04/01/09	28	0.792	

* EXT = SEE PROJECT QAPP REQUIREMENTS

* ANAL = SEE PROJECT QAPP REQUIREMENTS

METHOD BLANK SUMMARY

Login Number: <u>L09030671</u>	Work Group: <u>WG298726</u>
Blank File ID: <u>I20331091642.05</u>	Blank Sample ID: <u>WG298726-01</u>
Prep Date: <u>03/31/09 16:07</u>	Instrument ID: <u>IC2</u>
Analyzed Date: <u>03/31/09 16:42</u>	Method: <u>300.0</u>
Analyst: <u>HAV</u>	

This Method Blank Applies To The Following Samples:

Client ID	Lab Sample ID	Lab File ID	Time Analyzed	TAG
LCS	WG298726-02	I20331091659.06	03/31/09 16:59	01
LCS-P_A	WG298726-07	I20331091717.07	03/31/09 17:17	01
16WW36-033009	L09030671-01	I20331091734.08	03/31/09 17:34	DL01
DUP	WG298726-04	I20331091826.11	03/31/09 18:26	DL01
LCS-P_A	WG298726-08	I20331092120.21	03/31/09 21:20	01
LCS-P_A	WG298726-09	I20331092138.22	03/31/09 21:38	01
16WW28-033009	L09030671-02	I20401091108.28	04/01/09 11:08	DL01

Report Name: BLANK_SUMMARY
PDF File ID: 1355671
Report generated 04/01/2009 15:47



Login Number: L09030671 Prep Date: 03/31/09 16:07 Sample ID: WG298726-01
Instrument ID: IC2 Run Date: 03/31/09 16:42 Prep Method: 300.0
File ID: I20331091642.05 Analyst: HAV Method: 300.0
Workgroup (AAB#): WG298726 Matrix: Water Units: mg/L
Contract #: DACA56-94-D-0020 Cal ID: IC2 - 29-OCT-08

Analytes	SDL	PQL	Concentration	Dilution	Qualifier
Chloride	0.100	0.200	0.100	1	U

SDL Method Detection Limit
PQL Reporting/Practical Quantitation Limit
ND Analyte Not detected at or above reporting limit
* |Analyte concentration| > RL

Report Name: BLANK
PDF ID: 1355672
01-APR-2009 15:47



Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298726-02
Instrument ID: IC2 Run Time: 16:59 Prep Method: 300.0
File ID: I20331091659.06 Analyst: HAV Method: 300.0
Workgroup (AAB#): WG298726 Matrix: Water Units: mg/L
QC Key: STD Lot#: STD29498 Cal ID: IC2 - 29-OCT-08

Analytes	Expected	Found	% Rec	LCS Limits	Q
Chloride	6.00	6.08	101	90 - 110	

Login Number: L09030671
Analytical Method: 300.0
ICAL Workgroup: WG286387

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte		AVG RF	% RSD	LINEAR (R ²)	QUAD(R ²)
Chloride		8.478	9.08		0.99900

R = Correlation coefficient; 0.995 minimum

R² = Coefficient of determination; 0.99 minimum

This method always uses quadratic calibration model (R²)

Login Number: L09030671
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-01			WG286387-02			WG286387-03		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	0.200	0.0220000000 0	9.091	2.00	0.2220000000	9.009	4.00	0.4540000000	8.811

INT_CAL - Modified 03/06/2008
PDF File ID: 1356188
Report generated 04/01/2009 15:47



Login Number: L09030671
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-04			WG286387-05			WG286387-06		
	CONC	RESP	RF	CONC	RESP	RF	CONC	RESP	RF
Chloride	6.00	0.695000000	8.633	8.00	0.944000000	8.475	12.0	1.45300000	8.259

INT_CAL - Modified 03/06/2008
PDF File ID: 1356188
Report generated 04/01/2009 15:47



Login Number: L09030671
Analytical Method: 300.0

Instrument ID: IC2
Initial Calibration Date: 29-OCT-08 15:17
Column ID: F

Analyte	WG286387-07		
	CONC	RESP	RF
Chloride	48.0	6.79200000	7.067

Login Number: L09030671 Run Date: 10/29/2008 Sample ID: WG286387-08
Instrument ID: IC2 Run Time: 15:34 Method: 300.0
File ID: I21029081534.08 Analyst: JWR QC Key: STD
ICal Workgroup: WG286387 Cal ID: IC2 - 29-OCT-08

Analyte		Expected	Found	Units	RF	%D	UCL	Q
Chloride		6.00	6.16	mg/L	8.34	2.70	10	

* Exceeds %D Limit

Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298670-02
Instrument ID: IC2 Run Time: 16:24 Method: 300.0
File ID: I20331091624.04 Analyst: HAV Units: mg/L
Workgroup (AAB#): WG298726 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298670-04
Instrument ID: IC2 Run Time: 19:53 Method: 300.0
File ID: I20331091953.16 Analyst: HAV Units: mg/L
Workgroup (AAB#): WG298726 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298670-06
Instrument ID: IC2 Run Time: 22:13 Method: 300.0
File ID: I20331092213.24 Analyst: HAV Units: mg/L
Workgroup (AAB#): WG298726 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298670-08
Instrument ID: IC2 Run Time: 10:51 Method: 300.0
File ID: I20401091051.27 Analyst: HAV Units: mg/L
Workgroup (AAB#): WG298726 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298670-10
Instrument ID: IC2 Run Time: 11:43 Method: 300.0
File ID: I20401091143.30 Analyst: HAV Units: mg/L
Workgroup (AAB#): WG298726 Cal ID: IC2 -
Matrix: WATER

Analytes	MDL	RDL	Concentration	Qualifier
Chloride	0.100	0.200	0.100	U

U = Result is less than MDL.
F = Result is between MDL and RL.
* = Result is above RL.

Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298670-01
Instrument ID: IC2 Run Time: 16:07 Method: 300.0
File ID: I20331091607.03 Analyst: HAV QC Key: STD
Workgroup (AAB#): WG298726 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.08	mg/L	8.46	1.35	10	

* Exceeds %D Criteria

Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298670-03
Instrument ID: IC2 Run Time: 19:36 Method: 300.0
File ID: I20331091936.15 Analyst: HAV QC Key: STD
Workgroup (AAB#): WG298726 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.07	mg/L	8.49	1.08	10	

* Exceeds %D Criteria

Login Number: L09030671 Run Date: 03/31/2009 Sample ID: WG298670-05
Instrument ID: IC2 Run Time: 21:55 Method: 300.0
File ID: I20331092155.23 Analyst: HAV QC Key: STD
Workgroup (AAB#): WG298726 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.04	mg/L	8.52	0.583	10	

* Exceeds %D Criteria

Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298670-07
Instrument ID: IC2 Run Time: 10:34 Method: 300.0
File ID: I20401091034.26 Analyst: HAV QC Key: STD
Workgroup (AAB#): WG298726 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.09	mg/L	8.45	1.42	10	

* Exceeds %D Criteria

Login Number: L09030671 Run Date: 04/01/2009 Sample ID: WG298670-09
Instrument ID: IC2 Run Time: 11:26 Method: 300.0
File ID: I20401091126.29 Analyst: HAV QC Key: STD
Workgroup (AAB#): WG298726 Cal ID: IC2 - 29-OCT-08
Matrix: WATER

Analyte	Expected	Found	UNITS	RF	%D	UCL	Q
Chloride	6.00	6.08	mg/L	8.46	1.37	10	

* Exceeds %D Criteria

3.0 Attachments

Microbac Laboratories Inc.
Analyst Listing
April 6, 2009

ADC - ANTHONY D. CANTER	AJF - AMANDA J. FICKIESEN	ALB - ANNIE L. BROWN
AM - ALISON J. MILLER	AML - ANTHONY M. LONG	BRG - BRENDA R. GREGORY
CAA - CASSIE A. AUGENSTEIN	CAF - CHERYL A. FLOWERS	CAH - CHARLES A. HALL
CEB - CHAD E. BARNES	CLC - CHRYS L. CRAWFORD	CLW - CHARISSA L. WINTERS
CMS - CRYSTAL M. STEPHENS	CPD - CHAD P. DAVIS	CSH - CHRIS S. HILL
CTB - CHRIS T. BUCINA	DDE - DEBRA D. ELLIOTT	DEL - DON E. LIGHTFRITZ
DEV - DAVID E. VANDENBERG	DGB - DOUGLAS G. BUTCHER	DIH - DEANNA I. HESSON
DLB - DAVID L. BUMGARNER	DLP - DOROTHY L. PAYNE	DLR - DIANNA L. RAUCH
DR - DEANNA ROBERTS	ECL - ERIC C. LAWSON	EDA - ERIN D. AGEER
ERP - ERIN R. PORTER	FJB - FRANCES J. BOLDEN	HAV - HEMA VILASAGAR
HJR - HOLLY J. REED	JBK - JEREMY B. KINNEY	JDH - JUSTIN D. HESSON
JKP - JACQUELINE K. PARSONS	JKT - JANE K. THOMPSON	JWR - JOHN W. RICHARDS
JWS - JACK W. SHEAVES	JYH - JI Y. HU	KEB - KATHRYN E. BARNES
KHR - KIM H. RHODES	KRA - KATHY R. ALBERTSON	LHT - LANCE H. THOMPSON
LKN - LINDA K. NEDEFF	LSB - LESLIE S. BUCINA	MDA - MIKE D. ALBERTSON
MDC - MICHAEL D. COCHRAN	MES - MARY E. SCHILLING	MMB - MAREN M. BEERY
MRT - MICHELLE R. TAYLOR	MSW - MATT S. WILSON	NPM - NATHANIEL P. MILLER
PDM - PIERCE D. MORRIS	RAH - ROY A. HALSTEAD	RB - ROBERT BUCHANAN
REK - ROBERT E. KYER	RLK - ROBIN L. KLINGER	RWC - RODNEY W. CAMPBELL
SAV - SARAH A. VANDENBERG	SDH - SHANA D. HINYARD	SDL - SHELLEY D. LENT
SLM - STEPHANIE L. MOSSBURG	SLP - SHERI L. PFALZGRAF	TDH - TRICIA D. HUCK
TIP - TAE I. PARRISH	TMB - TIFFANY M. BAILEY	TMM - TAMMY M. MORRIS
VC - VICKI COLLIER	WTD - WADE T. DELONG	

List of Valid Qualifiers

April 06, 2009

Qualifier: STD

Qualifier	Description
*	Surrogate or spike compound out of range
+	Correlation coefficient for the MSA is less than 0.995
<	Result is less than the associated numerical value.
>	Result is greater than the associated numerical value.
A	See the report narrative
B	Analyte present in method blank
B1	Target analyte detected in method blank at or above the method reporting limit
B3	Target analyte detected in calibration blank at or above the method reporting limit
C	Confirmed by GC/MS
CG	Confluent growth
DL	Surrogate or spike compound was diluted out
E	Estimated concentration due to sample matrix interference
EDL	Elevated sample reporting limits, presence of non-target analytes
EMPC	Estimated Maximum Possible Concentration
F, S	Estimated result below quantitation limit; method of standard additions(MSA)
FL	Free Liquid
H1	Sample analysis performed past holding time.
I	Semiquantitative result (out of instrument calibration range)
J	The analyte was positively identified, but the quantitation was below the RL
J,B	Analyte detected in both the method blank and sample above the MDL.
J,P	Estimate; columns don't agree to within 40%
J,S	Estimated concentration; analyzed by method of standard addition (MSA)
L	Sample reporting limits elevated due to matrix interference
L1	The associated blank spike (LCS) recovery was above the laboratory acceptance limits.
L2	The associated blank spike (LCS) recovery was below the laboratory acceptance limits.
M	Matrix effect; the concentration is an estimate due to matrix effect.
N	Tentatively identified compound(TIC)
NA	Not applicable
ND	Not detected at or above the reporting limit (RL).
ND, L	Not detected; sample reporting limit (RL) elevated due to interference
ND, S	Not detected; analyzed by method of standard addition (MSA)
NF	Not found by library search
NFL	No free liquid
NI	Non-ignitable
NR	Analyte is not required to be analyzed
NS	Not spiked
P	Concentrations >40% difference between the two GC columns
Q	One or more quality control criteria fail. See narrative.
QNS	Quantity of sample not sufficient to perform analysis
RA	Reanalysis confirms reported results
RE	Reanalysis confirms sample matrix interference
S	Analyzed by method of standard addition (MSA)
SMI	Sample matrix interference on surrogate
SP	Reported results are for spike compounds only
TIC	Library Search Compound
TNTC	Too numerous to count
U	Undetected; the concentration is below the reported MDL.
UJ	Undetected; the MDL and RL are estimated due to quality control discrepancies.
W	Post-digestion spike for furnace AA out of control limits
X	Exceeds regulatory limit
X, S	Exceeds regulatory limit; method of standard additions (MSA)
Z	Cannot be resolved from isomer - see below

***Special Notes for Organic Analytes

1. Acrolein and acrylonitrile by method 624 are semi-quantitative screens only.
2. 1,2-Diphenylhydrazine is unstable and is reported as azobenzene.
3. N-nitrosodiphenylamine cannot be separated from diphenylamine.
4. 3-Methylphenol and 4-Methylphenol are unresolvable compounds.
5. m-Xylene and p-Xylene are unresolvable compounds.
6. The reporting limits for Appendix II/IX compounds by method 8270 are based on EPA estimated PQLs referenced in 40 CFR Part 264, Appendix IX. They are not always achievable for every compound and are matrix dependent.





Shaw® Shaw Environmental & Infrastructure, Inc.
3010 Briarpark Drive, Suite 400
Houston, TX 77042
(713) 996-4400

Chain of Custody

Laboratory Name: MICROBAC LABS				Address: 158 Starlite Drive Marietta, Ohio 45750				Contact: Stephanie Mossburg 740-373-4071							
Project Name: Loughorn Marc				Project Location: Karnack, Texas				Analysis and Method Desired (Indicate separate containers)				Remarks			
Project No.: 117591-00058004				Project Contact: Allen Wilmore		Project Telephone No.: (713) 247-9292		Number of Containers VOCs Chloride							
Point of Contact: Jennifer Hoang				Project Manager/Supervisor: Praveen Srivastav											
Telephone No.: 713-996-4408															
Item No.	Sample Number	Date	Time	Comp	Grab	Matrix	Sample Description, Location								
1	16WW36-033009	3/30/09	0800		✓	W	SITE 16	4	X	X					
2	16WW38-033009	3/30/09	16:20		✓	W	SITE 16	4	X	X					
3															
4															
5															
6															
7															
8															
9															
10															
Transfers Relinquished By (signature)				Date/Time		Transfers Accepted By (signature)		Date/Time		Special Instructions: 24-hour TAT on All samples					
<i>[Signature]</i>				3/30/09 17:45		<i>[Signature]</i>									
										FedEx Airbill No.:					
						Laboratory: <i>[Signature]</i>		3/31/09 0920		Sampler's Signature: <i>[Signature]</i>					
TAT: _____ Standard _____ Rush Date _____				Seals Intact? _____ Y _____ N		Received Good Condition _____ Y _____ N _____ Cold									

Client: Shaw - Longhorn				
Workorder Number: B 24848				
Date Received: 3-3-09				
Delivered by: () Fedx () UPS () Client () Courier Time: 0926				
Opened by:				
IR Temp Gun: () G () H				
Logged by: RLC L 09030671				

Cooler information

Cooler ID	Temp C	Airbill#	COC#	Other
3088	4	J204 777498 9	5811	water-QT 24TAT

Inspection Checklist

	Y	N	NA	Discrepancy ID
Were shipping coolers sealed?	✓			
Were custody seals intact?	✓			
Were cooler temperatures in range of 0 - 6?	✓			
Was ice present?	✓			
Were COC's received/ information complete/signed and dated?	✓			
Were sample containers and labels intact and match COC?	✓			
Were the correct containers and volumes received?	✓			
Were correct preservatives used? (water only)			✓	
Were pH ranges acceptable? (voa's excluded)			✓	
Were VOA samples free of headspace (< 6mm)?	✓			
Were samples received within EPA hold times?	✓			

Discrepancy/Comments/Other Problems

Distribution

Name of Microbac representative:
Client/Company:
Person Contacted:
Date contacted:

Resolution/other comments:

Internal Chain of Custody Report

Login: L09030671

Account: 2773

Project: 2773.025

Samples: 2

Due Date: 01-APR-2009

Samplenum **Container ID** **Products**
L09030671-02 567692 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	31-MAR-2009 10:11	RLK	
2	ANALYZ	V1	ORG4	31-MAR-2009 10:25	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	31-MAR-2009 10:11	RLK	
2	ANALYZ	V1	ORG4	31-MAR-2009 10:25	MRT	RLK

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	31-MAR-2009 10:11	RLK	
2	ANALYZ	V1	ORG4	31-MAR-2009 10:25	MRT	RLK

Samplenum **Container ID** **Products**
L09030671-01 567690 826-LOW

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	31-MAR-2009 10:11	RLK	
2	ANALYZ	V1	ORG4	31-MAR-2009 10:25	MRT	RLK

Bottle: 2

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	31-MAR-2009 10:11	RLK	
2	ANALYZ	V1	ORG4	31-MAR-2009 10:25	MRT	RLK

Bottle: 3

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	V1	31-MAR-2009 10:11	RLK	
2	ANALYZ	V1	ORG4	31-MAR-2009 10:25	MRT	RLK

Samplenum **Container ID** **Products**
L09030671-02 567693 300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	L1	31-MAR-2009 10:11	RLK	
2	ANALYZ	L1	SEM	31-MAR-2009 13:19	JWR	RLK
3	STORE	SEM	A1	02-APR-2009 10:46	RLK	CPD

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Internal Chain of Custody Report

Login: L09030671**Account:** 2773**Project:** 2773.025**Samples:** 2**Due Date:** 01-APR-2009

<u>Samplenum</u>	<u>Container ID</u>	<u>Products</u>
L09030671-01	567691	300

Bottle: 1

Seq.	Purpose	From	To	Date/Time	Accept	Relinquish
1	LOGIN	COOLER	L1	31-MAR-2009 10:11	RLK	
2	ANALYZ	L1	SEM	31-MAR-2009 13:19	JWR	RLK
3	STORE	SEM	A1	02-APR-2009 10:46	RLK	CPD

A1 - Sample Archive (COLD)
A2 - Sample Archive (AMBIENT)
F1 - Volatiles Freezer in Login
V1 - Volatiles Refrigerator in Login
W1 - Walkin Cooler in Login



Appendix C

Basis of Estimate for LHAAP-16 Remediation

BASIS OF ESTIMATE FOR LHAAP-16 REMEDIATION, LHAAP-16 FS ADDENDUM, LHAAP, KARNACK, TEXAS

The information included here is based on the cost estimate in Appendix A of the Site 16 FS (Jacobs, 2002).

Work Breakdown Structure

- 1.0 LHAAP-16 Remediation
- 1.10 Alternative 7, Cap, Land Use Controls, In Situ Bioremediation, Passive Biobarrier, and Monitored Natural Attenuation,
 - 1.XX.10 O&M Maintenance Cap
 - 1.XX.20 Land Use Controls
 - 1.XX.30 In Situ Enhanced Bioremediation
 - 1.XX.40 Passive Biobarrier
 - 1.XX.50 Monitored Natural Attenuation
 - 1.XX.60 Long-term Monitoring

Notes:

- “XX” represents the alternative number.

Accuracy of Estimate

- The estimate is being prepared for a CERCLA feasibility study. The accuracy of the estimate is +50 percent – 30 percent in accordance with CERCLA guidance. No contingency is included in the estimate.

General assumptions:

This section discusses assumptions used to generate the estimated and is not alternative-specific.

- Client will subcontract remediation to a General Contractor. The General Contractor will subcontract to specialty subcontractors to perform different remediation tasks.
- O&M activities will be performed by a subcontractor for the client.
- General Contractor will receive a 15 percent mark-up on subcontractor cost. General Contractor will not receive 15 percent mark-up on his direct cost.
- Mark-up includes general overhead and profit.

- Construction Management WBS only includes General Contractor's direct cost plus his 15 percent mark-up on his subcontractors.
- Sales Taxes have been applied on material only at 6.5 percent.
- When earlier estimates were updated, inflation was estimated using the Engineering News Record Construction Cost Index (28% from 2001 to 2008).

Labor Rates:

Labor rates used in the estimate are national averages and are not area specific. The labor rates include direct cost, fringes, employer liability and workmen's compensation. Some rates as indicated below are fully burdened including indirect and profit. The following are the rates used in the estimate:

Laborer (L)	\$25.38 per hour
Equipment Operator (OP)	\$37.67 per hour
Pipe Fitter (PF)	\$39.43 per hour
Electrician (E)	\$39.56 per hour
Truck Driver (TD)	\$27.75 per hour
Engineer/Geologist (Eng)	\$85.20 per hour (Fully Burden Rate)
Superintendent- GC (Super)	\$85.20 per hour (Fully Burden Rate)
Superintendent- SUB (Super)	\$72.09 per hour
Technician (Tech)	\$45.88 per hour
Technical Services Composite Rate (X-1)	\$78.65 per hour (Fully Burden Rate)
Health & Safety Officer (H/S)	\$58.99 per hour
Hazardous Material Tech. (HMT)	\$52.43 per hour
Composite Construction Rate (X)	\$32.77 per hour
Vendor Technical	\$98.31 per hour

Material, Equipment and Production:

The material, equipment and production rates were generated using national averages obtained from nationally recognized cost references such as R.S. Means and Richardson.

The estimators used their experience to modify national average production rates for remedial action work. Most national cost references are based on the construction of facilities and not the remediation of existing facilities. Cost adjustments are required to reflect the actual estimated cost of the work.

O&M Costs:

O&M costs do not include capital cost for the installation of equipment, wells or the modification of existing facilities. O&M costs will be assumed to go for 30 years from the beginning of the project unless otherwise specified in the alternative discussion part of the document.

Present Worth:

Present Worth is calculated based on the schedule in the alternative discussion section of the document. A discount factor of 2.7 percent per year was used to calculate present worth.

Analytical Requirements:

Suite 1-	VOCs, perchlorate, pH, TDS, Temperature, Conductivity
Suite 2-	VOCs, perchlorate, dissolved oxygen, ORP, pH, temperature, ferrous iron, dissolved iron and manganese, nitrate, sulfate, sulfide, chloride, alkalinity, total organic carbon, dissolved gases (methane, ethane, and ethene)

Alternative 1, Present Value LHAAP-16 FS ADDENDUM, LHAAP

WBS NO. :												
COMPANY NAME:				SHAW E&I								
PROJECT LOCATION:				KARNACK, TEXAS						DATE: January 2010		
FY	Capital Costs			O & M Costs						Present Value (NPV)		
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M
										2.7%		
										NPV	0	632,007
2010	0			29,631					29,631			
2011	0			21,938					21,938			
2012	0			21,938					21,938			
2013	0			21,938					21,938			
2014	0			21,938	35,000				56,938			
2015	0			29,631					29,631			
2016	0			21,938					21,938			
2017	0			21,938					21,938			
2018	0			21,938					21,938			
2019	0			21,938	35,000				56,938			
2020	0			29,631					29,631			
2021	0			21,938					21,938			
2022	0			21,938					21,938			
2023	0			21,938					21,938			
2024	0			21,938	35,000				56,938			
2025	0			29,631					29,631			
2026	0			21,938					21,938			
2027	0			21,938					21,938			
2028	0			21,938					21,938			
2029	0			21,938	35,000				56,938			
2030	0			29,631					29,631			
2031	0			21,938					21,938			
2032	0			21,938					21,938			
2033	0			21,938					21,938			
2034	0			21,938	35,000				56,938			
2035	0			29,631					29,631			
2036	0			21,938					21,938			
2037	0			21,938					21,938			
2038	0			21,938					21,938			
2039	0			21,938	35,000				56,938			
	0			704,295	175,000	0	0	0	914,295			\$632,007

Alternative 2, Present Value LHAAP-16 FS ADDENDUM, LHAAP

WBS NO. :		COMPANY NAME:		SHAW E&I									
		PROJECT LOCATION:		KARNACK, TEXAS									
				DATE: January 2010									
FY		Capital Costs		O & M Costs						Present Value (NPV)			
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M	
										2.7%			
										NPV	762,710	9,053,534	
2010		246,648		29,631	141,443				171,074				
2011		529,995		21,938	28,817				50,755				
2012		0		21,938	28,817	42,293			93,048				
2013		0		21,938	28,817	42,293			93,048				
2014		0		21,938	63,817	42,293			128,048				
2015		0		29,631	20,312	42,293			92,236				
2016		0		21,938	20,312	502,101			544,351				
2017		0		21,938	20,312	502,101			544,351				
2018		0		21,938	20,312	502,101			544,351				
2019		0		21,938	55,312	502,101			579,351				
2020		0		29,631	20,312	502,101			552,044				
2021		0		21,938	20,312	502,101			544,351				
2022		0		21,938	20,312	502,101			544,351				
2023		0		21,938	20,312	502,101			544,351				
2024		0		21,938	55,312	502,101			579,351				
2025		0		29,631	20,312	502,101			552,044				
2026		0		21,938	20,312	502,101			544,351				
2027		0		21,938	20,312	502,101			544,351				
2028		0		21,938	20,312	502,101			544,351				
2029		0		21,938	55,312	502,101			579,351				
2030		0		29,631	20,312	502,101			552,044				
2031		0		21,938	20,312	502,101			544,351				
2032		0		21,938	20,312	502,101			544,351				
2033		0		21,938	20,312	502,101			544,351				
2034		0		21,938	55,312	502,101			579,351				
2035		0		29,631	20,312	502,101			552,044				
2036		0		21,938	20,312	502,101			544,351				
2037		0		21,938	20,312	502,101			544,351				
2038		0		21,938	20,312	502,101			544,351				
2039		0		21,938	55,312	502,101			579,351				
		776,643		704,295	974,512	12,219,598	0	0	13,898,404			\$9,816,244	

Alternative 3a, Present Value LHAAP-16 FS ADDENDUM, LHAAP

WBS NO. :		COMPANY NAME:		SHAW E&I								
		PROJECT LOCATION:		KARNACK, TEXAS						DATE: January 2010		
FY		Capital Costs		O & M Costs						Present Value (NPV)		
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M
										2.7%		
										NPV	618,402	2,095,004
2010		556,219		29,631	219,780				249,411			
2011		63,862		21,938	62,369				84,307			
2012		0		21,938	62,369				84,307			
2013		0		21,938	62,369				84,307			
2014		0		21,938	97,369				119,307			
2015		0		29,631	62,369				92,000			
2016		0		21,938	62,369				84,307			
2017		0		21,938	62,369				84,307			
2018		0		21,938	62,369				84,307			
2019		0		21,938	97,369				119,307			
2020		0		29,631	62,369				92,000			
2021		0		21,938	62,369				84,307			
2022		0		21,938	62,369				84,307			
2023		0		21,938	62,369				84,307			
2024		0		21,938	97,369				119,307			
2025		0		29,631	62,369				92,000			
2026		0		21,938	62,369				84,307			
2027		0		21,938	62,369				84,307			
2028		0		21,938	62,369				84,307			
2029		0		21,938	97,369				119,307			
2030		0		29,631	62,369				92,000			
2031		0		21,938	62,369				84,307			
2032		0		21,938	62,369				84,307			
2033		0		21,938	62,369				84,307			
2034		0		21,938	97,369				119,307			
2035		0		29,631	62,369				92,000			
2036		0		21,938	62,369				84,307			
2037		0		21,938	62,369				84,307			
2038		0		21,938	62,369				84,307			
2039		0		21,938	97,369				119,307			
		620,081		704,295	2,238,484	0	0	0	2,942,779			\$2,713,406

Alternative 3b, Present Value LHAAP-16 FS ADDENDUM, LHAAP

WBS NO. :		COMPANY NAME:		SHAW E&I								
		PROJECT LOCATION:		KARNACK, TEXAS						DATE: January 2010		
FY		Capital Costs		O & M Costs					Present Value (NPV)			
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M
										2.7%		
										NPV	1,290,064	2,136,111
2010		671,062		29,631	141,443				171,074			
2011		635,715		21,938	28,817				50,755			
2012		0		21,938	28,817	39,431			90,186			
2013		0		21,938	28,817	39,431			90,186			
2014		0		21,938	63,817	39,431			125,186			
2015		0		29,631	159,529	39,431			228,591			
2016		0		21,938	63,432				85,370			
2017		0		21,938	63,432				85,370			
2018		0		21,938	63,432				85,370			
2019		0		21,938	98,432				120,370			
2020		0		29,631	63,432				93,063			
2021		0		21,938	63,432				85,370			
2022		0		21,938	63,432				85,370			
2023		0		21,938	63,432				85,370			
2024		0		21,938	98,432				120,370			
2025		0		29,631	63,432				93,063			
2026		0		21,938	63,432				85,370			
2027		0		21,938	63,432				85,370			
2028		0		21,938	63,432				85,370			
2029		0		21,938	98,432				120,370			
2030		0		29,631	63,432				93,063			
2031		0		21,938	63,432				85,370			
2032		0		21,938	63,432				85,370			
2033		0		21,938	63,432				85,370			
2034		0		21,938	98,432				120,370			
2035		0		29,631	63,432				93,063			
2036		0		21,938	63,432				85,370			
2037		0		21,938	63,432				85,370			
2038		0		21,938	63,432				85,370			
2039		0		21,938	98,432				120,370			
		1,306,777		704,295	2,148,603	157,724	0	0	3,010,622			\$3,426,175

Alternative 4, Present Value LHAAP-16 FS ADDENDUM, LHAAP

COMPANY NAME: SHAW E&I												
WBS NO. :												
PROJECT LOCATION: KARNACK, TEXAS												
DATE: January 2010												
FY	Capital Costs			O & M Costs						Present Value (NPV)		
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M
										2.7%		
										NPV	2,542,934	2,019,615
2010		589,063		29,631	141,443				171,074			
2011		2,006,626		21,938	28,817				50,755			
2012		0		21,938	28,817		17,892		68,647			
2013		0		21,938	28,817		17,892		68,647			
2014		0		21,938	63,817		17,892		103,647			
2015		0		29,631	20,312		17,892		67,834			
2016		0		21,938	20,312		17,892		60,142			
2017		0		21,938	20,312		195,090		237,340			
2018		0		21,938	20,312		17,892		60,142			
2019		0		21,938	55,312		17,892		95,142			
2020		0		29,631	20,312		17,892		67,834			
2021		0		21,938	20,312		17,892		60,142			
2022		0		21,938	20,312		17,892		60,142			
2023		0		21,938	20,312		195,090		237,340			
2024		0		21,938	55,312		17,892		95,142			
2025		0		29,631	20,312		17,892		67,834			
2026		0		21,938	20,312		17,892		60,142			
2027		0		21,938	20,312		17,892		60,142			
2028		0		21,938	20,312		17,892		60,142			
2029		0		21,938	55,312		195,090		272,340			
2030		0		29,631	20,312		17,892		67,834			
2031		0		21,938	20,312		17,892		60,142			
2032		0		21,938	20,312		17,892		60,142			
2033		0		21,938	20,312		17,892		60,142			
2034		0		21,938	55,312		17,892		95,142			
2035		0		29,631	20,312		195,090		245,033			
2036		0		21,938	20,312		17,892		60,142			
2037		0		21,938	20,312		17,892		60,142			
2038		0		21,938	20,312		17,892		60,142			
2039		0		21,938	55,312		17,892		95,142			
		2,595,689		704,295	974,511	0	1,209,759	0	2,888,566			\$4,562,549

Alternative 5a, Present Value LHAAP-16 FS ADDENDUM, LHAAP

COMPANY NAME: SHAW E&I												
WBS NO. :												
PROJECT LOCATION: KARNACK, TEXAS												
DATE: January 2010												
FY	Capital Costs			O & M Costs						Present Value (NPV)		
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M
										2.7%		
										NPV	3,084,778	9,985,311
2010		1,130,907		29,631	141,443				171,074			
2011		2,006,626		21,938	28,817				50,755			
2012		0		21,938	28,817	35,138	31,499		117,392			
2013		0		21,938	28,817	35,138	31,499		117,392			
2014		0		21,938	63,817	35,138	31,499		152,392			
2015		0		29,631	20,312	35,138	31,499		116,580			
2016		0		21,938	20,312	494,946	31,499		568,695			
2017		0		21,938	20,312	494,946	208,698		745,894			
2018		0		21,938	20,312	494,946	31,499		568,695			
2019		0		21,938	55,312	494,946	31,499		603,695			
2020		0		29,631	20,312	494,946	31,499		576,388			
2021		0		21,938	20,312	494,946	31,499		568,695			
2022		0		21,938	20,312	494,946	31,499		568,695			
2023		0		21,938	20,312	494,946	208,698		745,894			
2024		0		21,938	55,312	494,946	31,499		603,695			
2025		0		29,631	20,312	494,946	31,499		576,388			
2026		0		21,938	20,312	494,946	31,499		568,695			
2027		0		21,938	20,312	494,946	31,499		568,695			
2028		0		21,938	20,312	494,946	31,499		568,695			
2029		0		21,938	55,312	494,946	208,698		780,894			
2030		0		29,631	20,312	494,946	31,499		576,388			
2031		0		21,938	20,312	494,946	31,499		568,695			
2032		0		21,938	20,312	494,946	31,499		568,695			
2033		0		21,938	20,312	494,946	31,499		568,695			
2034		0		21,938	55,312	494,946	31,499		603,695			
2035		0		29,631	20,312	494,946	208,698		753,587			
2036		0		21,938	20,312	494,946	31,499		568,695			
2037		0		21,938	20,312	494,946	31,499		568,695			
2038		0		21,938	20,312	494,946	31,499		568,695			
2039		0		21,938	55,312	494,946	31,499		603,695			
		3,137,533		704,295	974,512	12,019,254	1,590,776	0	15,288,837			\$13,070,090

Alternative 5b, Present Value LHAAP-16 FS ADDENDUM, LHAAP

WBS NO. :												
COMPANY NAME: SHAW E&I												
PROJECT LOCATION: KARNACK, TEXAS												
DATE: January 2010												
FY	Capital Costs			O & M Costs					Present Value (NPV)			
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M
										2.7%		
										NPV	106,113,521	9,492,134
2010	1,255,842				141,443				141,443			
2011	36,856,758				28,817				28,817			
2012	36,856,758				28,817	35,138	31,499		95,454			
2013	36,856,758				28,817	35,138	31,499		95,454			
2014	0				63,817	35,138	31,499		130,454			
2015	0				20,312	35,138	31,499		86,949			
2016	0				20,312	494,946	31,499		546,757			
2017	0				20,312	494,946	208,698		723,956			
2018	0				20,312	494,946	31,499		546,757			
2019	0				55,312	494,946	31,499		581,757			
2020	0				20,312	494,946	31,499		546,757			
2021	0				20,312	494,946	31,499		546,757			
2022	0				20,312	494,946	31,499		546,757			
2023	0				20,312	494,946	208,698		723,956			
2024	0				55,312	494,946	31,499		581,757			
2025	0				20,312	494,946	31,499		546,757			
2026	0				20,312	494,946	31,499		546,757			
2027	0				20,312	494,946	31,499		546,757			
2028	0				20,312	494,946	31,499		546,757			
2029	0				55,312	494,946	208,698		758,956			
2030	0				20,312	494,946	31,499		546,757			
2031	0				20,312	494,946	31,499		546,757			
2032	0				20,312	494,946	31,499		546,757			
2033	0				20,312	494,946	31,499		546,757			
2034	0				55,312	494,946	31,499		581,757			
2035	0				20,312	494,946	208,698		723,956			
2036	0				20,312	494,946	31,499		546,757			
2037	0				20,312	494,946	31,499		546,757			
2038	0				20,312	494,946	31,499		546,757			
2039	0				55,312	494,946	31,499		581,757			
	111,826,115			0	974,512	12,019,254	1,590,776	0	14,584,542			\$115,605,655

Alternative 6, Present Value LHAAP-16 FS ADDENDUM, LHAAP

COMPANY NAME: SHAW E&I												
WBS NO. :												
PROJECT LOCATION: KARNACK, TEXAS												
DATE: January 2010												
FY	Capital Costs			O & M Costs						Present Value (NPV)		
				Maint. Cap	L T Monitor	Extraction Wells	Perm Barrier	SVE	Total	Discount Rate	Capital	O & M
										2.7%		
										NPV	2,745,687	3,652,987
2010		1,434,662		29,631	205,814				235,445			
2011		1,346,423		21,938	62,369				84,307			
2012		0		21,938	62,369			349,496	433,803			
2013		0		21,938	62,369			349,496	433,803			
2014		0		21,938	97,369			349,496	468,803			
2015		0		29,631	62,369			349,496	441,496			
2016		0		21,938	62,369			349,496	433,803			
2017		0		21,938	62,369				84,307			
2018		0		21,938	62,369				84,307			
2019		0		21,938	97,369				119,307			
2020		0		29,631	62,369				92,000			
2021		0		21,938	62,369				84,307			
2022		0		21,938	62,369				84,307			
2023		0		21,938	62,369				84,307			
2024		0		21,938	97,369				119,307			
2025		0		29,631	62,369				92,000			
2026		0		21,938	62,369				84,307			
2027		0		21,938	62,369				84,307			
2028		0		21,938	62,369				84,307			
2029		0		21,938	97,369				119,307			
2030		0		29,631	62,369				92,000			
2031		0		21,938	62,369				84,307			
2032		0		21,938	62,369				84,307			
2033		0		21,938	62,369				84,307			
2034		0		21,938	97,369				119,307			
2035		0		29,631	62,369				92,000			
2036		0		21,938	62,369				84,307			
2037		0		21,938	62,369				84,307			
2038		0		21,938	62,369				84,307			
2039		0		21,938	97,369				119,307			
		2,781,085		704,295	2,224,517	0	0	1,747,480	4,676,292			\$6,398,674

Alternative 7, Present Value LHAAP-16 FS ADDENDUM

WBS NO. : 1.10		COMPANY NAME:		SHAW E&I		PROJECT LOCATION:		KARNACK, TEXAS		DATE:		January 2010	
	FY	Capital Costs		O & M Costs						Present Value (NPV)			
		ISEB	Other	Cap Maint	Biobarrier	Perf. Mon.	MNA	LTM	Total	Discount Rate	Capital	O & M	
										2.7%			
										NPV	392,596	1,587,057	
	2010	201,713	190,882	30,568	82,364	169,844		0	282,776				
	2011	0	0	22,689		136,228		0	158,916				
	2012	0	0	22,689			140,863	0	163,551				
	2013	0	0	22,689			149,397	0	172,086				
	2014	0	0	22,689				72,058	94,746				
	2015	0	0	30,568	82,364			0	112,932				
	2016	0	0	22,689				0	22,689				
	2017	0	0	22,689				0	22,689				
	2018	0	0	22,689				0	22,689				
	2019	0	0	22,689				72,058	94,746				
	2020	0	0	30,568	82,364			0	112,932				
	2021	0	0	22,689				0	22,689				
	2022	0	0	22,689				0	22,689				
	2023	0	0	22,689				0	22,689				
	2024	0	0	22,689				72,058	94,746				
	2025	0	0	30,568				0	30,568				
	2026	0	0	22,689				0	22,689				
	2027	0	0	22,689				0	22,689				
	2028	0	0	22,689				0	22,689				
	2029	0	0	22,689				72,058	94,746				
	2030	0	0	30,568				0	30,568				
	2031	0	0	22,689				0	22,689				
	2032	0	0	22,689				0	22,689				
	2033	0	0	22,689				0	22,689				
	2034	0	0	22,689				72,058	94,746				
	2035	0	0	30,568				0	30,568				
	2036	0	0	22,689				0	22,689				
	2037	0	0	22,689				0	22,689				
	2038	0	0	22,689				0	22,689				
	2039	0	0	22,689				72,058	94,746				
		201,713	190,882	727,934	247,091	306,072	290,260	432,346	2,003,703			\$1,979,653	

Alternative 7, Maintaining Exist Cap / Surface Soils LHAAP-16 FS ADDENDUM

WBS NO. : 1.10.10				COMPANY NAME:		SHAW E&I									
				PROJECT LOCATION:		KARNACK, TEXAS									
						DATE: January 2010									
Item NO	DESCRIPTION	QTY	UNIT	LABOR					MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	
	Annual costs														
1	Pre work plans & submittals	1	lot	40	40	eng	85.20	3,408	192	192		0		0	3,600
2	Site orientation, Training, etc	1	lot	40	40	op	37.67	1,507		0		0		0	1,507
3	Mow & inspect approx. 13.5 ac 3 ea / year	3	ea	48	144	op	37.67	5,424		0		0		0	5,424
4	Tractor mower	48	hr		0			0		0	38	1,839		0	1,839
5	Mob / demob	3	ea	16	48	op	37.67	1,808	192	575	192	575		0	2,958
								0							
	Repair eroded areas							0							
6	Replacement soil	50	cy	0.24	12	l	25.38	305	8.30	415		0		0	720
7	Dump truck-12 cy	8	hr	1	8	td	27.75	222		0	100.14	801		0	1,023
8	Backhoe loader	12	hr	1	12	op	37.67	452		0	66.29	795		0	1,248
9	Fertilize, seed & mulch	3	msf	1.30	4	l	25.38	99	38	115	19	57		0	271
	Subtotal							13,225		1,296		4,068		0	18,589
	Taxes @ 6.5 %									84					84
	Subtotal														18,674
	Indirects @ 21.5%														4,015
	Annual Total														22,689
	O & M Costs for 30 Years														\$ 680,657

Alternative 7, Maintaining Exist Cap / Surface Soils LHAAP-16 FS ADDENDUM

WBS NO. : 1.10.10				COMPANY NAME:		SHAW E&I									
				PROJECT LOCATION:		KARNACK, TEXAS									
						DATE: January 2010									
Item NO	DESCRIPTION	QTY	UNIT	LABOR					MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	
	O & M cost each 5 years														
	Repair landfill settlement areas														
1	Replacement soil	100	cy	0.24	24	l	25.38	609	8.52	852		0		0	1,461
2	Dump truck-12 cy	16	hr	1	16	td	27.75	444		0	100.14	1,602		0	2,046
3	Backhoe loader	16	hr	1	16	op	37.67	603		0	66.29	1,061		0	1,663
4	Fertilize, seed & mulch	5	msf	1.30	7	l	25.38	165	38	192	19	96		0	452
5	Mob / demob	1	ea	16	16	op	37.67	603		0	192	192		0	794
														0	
	Subtotal							2,424		1,044		2,950		0	6,417
	Taxes @ 6.5 %									68					68
	Subtotal														6,485
	Indirects @ 21.5%														1,394
	Total each 5 years														7,880
	O & M Costs for 30 Years														\$ 47,278
	LHAAP-16 TOTAL														\$ 727,934

Alternative 7, Land Use Controls LHAAP-16 FS ADDENDUM

WBS NO. : 1.10.20				COMPANY NAME: SHAW E&I											
				PROJECT LOCATION: KARNACK, TEXAS				DATE: January 2010							
Item NO	DESCRIPTION	QTY	UNIT	LABOR				MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)	
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT		\$ VALUE
	Land Use Controls														
1	Allowance for Legal Fees, Administration Controls, and Documentation	1	lot		0			0		0		0	63,862	63,862	63,862
	Subtotal							0		0		0		63,862	63,862
	Taxes @ 6.5 %									0					0
	Subtotal														63,862
	Indirects @ 21.5%														13,730
	Total Cost for LUCs														\$ 77,593

Alternative 7, In Situ Enhanced Bioaugmentation (ISEB) using DPT in Extraction Area LHAAP-16 FS ADDENDUM

WBS NO. : 1.10.30		COMPANY NAME:		SHAW E&I					PROJECT LOCATION:		KARNACK, TEXAS		DATE:		January 2010	
Item NO	DESCRIPTION	QTY	UNIT	LABOR				MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)		
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE		
	Apply ISEB around Extraction Wells															
	Includes:															
	1. Site Clearing															
	2. DPT Injection of emulsified vegetable oil (One Event) at edge of capture zone for extraction wells.															
	3. Two rows of DPT Injections, each one 300 feet long, (assume spacing of 15 feet)															
	4. Total of 40 DPT injection points															
	Assumptions:															
	1. Total Number of DPT Points =	40	points													
	2. Substrate Demand (per point) =	395	pounds/point													
	3. Substrate Demand (total) =	15800	pounds													
	4. DPT Points Injected per Day =	10	points/day													
	5. Estimated Field Time =	5	days													
	6. Assume 10-Hour Work Day															
	7. Oversight by Shaw Environmental															
	8. Shaw Field Crew (Geologist at 100%, Site Manager at 10%)															
	9. Bioaugmentation Demand 1.0 liters per point	40	liters													
	Design/Work Plan Activities (ISEB & Passive Biobarriers)															
1	Vendor/Technical	80	ea	1	80	vendor	98.31	7,865							7,865	
2	Engineer	400	ea	1	400	eng	85.20	34,080							34,080	
3	Geologist	160	ea	1	160	eng/geo	85.20	13,632							13,632	
4	Technician	80	ea	1	80	tech	45.88	3,670							3,670	
	Injection Activities															
1	Engineer	60	ea	1	60	eng	85.20	5,112							5,112	
2	Superintendent	60	ea	1	60	super	72.09	4,325							4,325	
3	Technician	60	ea	1	60	tech	45.88	2,753							2,753	
4	Carbon Source	15,800	lb						1.05	16,590					16,590	
5	Shipping	1	ea										3,000	3,000	3,000	
6	Bio-augmentation	40	liter						75	3,000					3,000	
7	Metering System rental	1	week								975	975			975	
8	Water truck	1	week									1,000			1,000	
9	Injection Supplies	1	ls							1,000					1,000	
10	Drilling Subcontractor Mob/Demob	1	ea										10,105	10,105	10,105	
11	Direct Push Technology Rig and Crew including per diem	40	point										574	22,960	22,960	
12	Airfare	3	ea										500	1,500	1,500	
13	Per Diem	18	day										47	846	846	
14	Lodging	15	day										99	1,485	1,485	
15	Rental Car	6	day										60	360	360	
16	Rental Car FOGM	6	day										12	72	72	
	Subtotal							71,437		20,590		1,975		40,328	134,330	
	Taxes @ 6.5 %									1,338					1,338	
	Subtotal														135,669	
	Indirects @ 21.5%														29,169	
	Total Cost for Shallow DPT Injections														\$ 164,838	

Alternative 7, In Situ Enhanced Bioaugmentation (ISEB) using DPT in Extraction Area LHAAP-16 FS ADDENDUM

WBS NO. : 1.10.30				COMPANY NAME:		SHAW E&I									
				PROJECT LOCATION:		KARNACK, TEXAS		DATE: January 2010							
Item NO	DESCRIPTION	QTY	UNIT	LABOR				MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)	
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	
	Apply ISEB at Six Intermediate Zone Wells														
	Includes:														
	1. Injection of emulsified vegetable oil (One Event) at intermediate zone monitoring wells.														
	2. Total of six monitoring wells.														
	Assumptions:														
	1. Total Number of Monitoring Wells =	6	wells												
	2. Substrate Demand (per well) =	750	pounds/well												
	3. Substrate Demand (total) =	4500	pounds												
	4. Wells Injected per Day =	3	wells/day												
	5. Estimated Field Time =	2	days												
	6. Assume 10-Hour Work Day														
	7. Oversight by Shaw Environmental														
	8. Shaw Field Crew (Geologist at 100%, Site Manager at 10%)														
	9. Bioaugmentation Demand 2.0 liters per well	12	liters												
	Injection Activities														
1	Engineer	16	ea	1	16	eng	85.20	1,363							1,363
2	Superintendent	16	ea	1	16	super	72.09	1,153							1,153
3	Technician	16	ea	1	16	tech	45.88	734							734
4	Carbon Source	4,500	lb						1.05	4,725					4,725
5	Shipping	1	ea										3,000	3,000	3,000
6	Bio-augmentation	12	liter						75	900					900
7	Metering System rental	1	week								975	975			975
8	Injection Supplies	1	ls							1,000					1,000
9	Injection Subcontractor Mob/Demob	1	ea										10,105	10,105	10,105
10	Injection Rig and Crew including per diem	6	point										574	3,444	3,444
11	Airfare	3	ea										500	1,500	1,500
12	Per Diem	6	day										47	282	282
13	Lodging	6	day										99	594	594
14	Rental Car	2	day										60	120	120
15	Rental Car FOGM	2	day										12	24	24
	Subtotal							3,251		6,625		975		19,069	29,920
	Taxes @ 6.5 %									431					431
	Subtotal														30,350
	Indirects @ 21.5%														6,525
	Total Cost for Intermediate Well Injections														\$ 36,876

Alternative 7, Passive Biobarriers LHAAP-16 FS ADDENDUM

WBS NO. : 1.10.40		COMPANY NAME:		SHAW E&I											
		PROJECT LOCATION:		KARNACK, TEXAS											
				DATE: January 2010											
Item NO	DESCRIPTION	QTY	UNIT	UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	TOTAL (\$)
	Install Biobarriers														
	Includes:														
	1. Site Clearing														
	2. DPT Injection of emulsified vegetable oil (One Event)														
	3. Total length of biobarrier near Harrison Bayou ~210-ft (assume 15-ft spacing of DPT points) will need 14 DPT points.														
	4. Total length of biobarrier near the Landfill ~500-ft (assume 15-ft spacing of DPT points) will need 33 DPT points.														
	Assumptions:														
	1. Total Number of DPT Points =	47	points												
	2. Substrate Demand (per point) =	8.5	pounds/point												
	3. Substrate Demand (total) =	400	pounds												
	4. DPT Points Injected per Day =	10	points/day												
	5. Estimated Field Time =	5	days												
	6. Assume 10-Hour Work Day														
	7. Oversight by Shaw Environmental														
	8. Shaw Field Crew (Geologist at 100%, Site Manager at 10%)														
	9. Bioaugmentation Demand 0.15 liters per point	7.05													
	Injection Activities														
1	Engineer	50	ea	1	50	eng	85.20	4,260							4,260
2	Superintendent	50	ea	1	50	super	72.09	3,605							3,605
3	Technician	50	ea	1	50	tech	45.88	2,294							2,294
4	Emulsified Vegetable Oil and Lactate Mixture	400	lb						19.00	7,591					7,591
5	Shipping	1	ea										3,000	3,000	3,000
6	Bioaugmentation	7.05	liter						75	529					529
7	Metering System rental	1	week								975	975			975
8	Water truck	1	week									1,000			1,000
9	Injection Supplies	1	ls							2,500					2,500
12	DPT Injections	47	ea										574	26,978	26,978
	DPT Injection contractor move/demove	1	lp										10,105	10,105	10,105
13	Airfare	3	ea										500	1,500	1,500
14	Per Diem	18	day										47	846	846
15	Lodging	15	day										99	1,485	1,485
16	Rental Car	6	day										60	360	360
17	Rental Car FOGM	6	day										12	72	72
	Subtotal							10,159		10,619		1,975		44,346	67,099
	Taxes @ 6.5 %									690					690
	Subtotal														67,789
	Indirects @ 21.5%														14,575
	Total Cost Per Injection														\$ 82,364
	Total Cost of 3 Injections (Years 1, 6, and 11)														\$247,091

Alternative 7, Performance Monitoring LHAAP-16 FS ADDENDUM

WBS NO. : 1.20.45				COMPANY NAME: SHAW E&I											
				PROJECT LOCATION: KARNACK, TEXAS				DATE: January 2010							
Item NO	DESCRIPTION	QTY	UNIT	LABOR				MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)	
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	
	Well Replacement - 5 wells with high chromium are assumed for replacement.														
1	Abandon wells	5	ea	5	25	tech	45.88	1,643	80	400	80	400	1,600	8,000	10,443
2	Install additional monitoring wells	5	ea	40	200	geol	71.20	14,240	1,500	7,500	36	180	6,000	30,000	51,920
	Subtotal							15,883		7,900		580		38,000	62,363
	Taxes @ 6.5 %									514					514
	Subtotal														62,876
	Indirects @ 21.5%														13,518
	Well Replacement Capital Costs														\$ 76,394
	Pilot Study and Field Tests														
1	Treatability/Pilot Study	1	ea	120	120	eng	85.20	10,224	200	200					10,424
2	Treatability/Pilot Sample Collection	1	ea	50	50	geol	71.20	3,560							3,560
3	Driller for Treatability/Pilot Sampling	3	wells										3150	9,450	9,450
4	Per Diem and Travel Costs	5	days						159	795	80.00	400			1,195
5	Mob / Demob	1	ea	40	40	eng	85.20	3,408	1,200	1,200	1,000	1,000			5,608
	Subtotal							3,408		1,995		1,400		0	30,237
	Taxes @ 6.5 %									130					130
	Subtotal														30,367
	Indirects @ 21.5%														6,529
	Pilot Study and Field Tests Capital Costs														\$ 36,896

Alternative 7, Performance Monitoring LHAAP-16 FS ADDENDUM

WBS NO. : 1.20.45		COMPANY NAME:				SHAW E&I				PROJECT LOCATION:						KARNACK, TEXAS				DATE:		January 2010	
Item NO	DESCRIPTION	QTY	UNIT	LABOR		MATERIAL			EQUIPMENT		SUBCONTRACT		TOTAL (\$)										
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE									
	Monitoring of 12 wells & 1 SW location, 2 sets QC samples (15 samples for analysis)																						
	Year 1																						
1	Establish initial database, licenses, coordinate well characterization & other well info, develop work plans, etc	1	ea	350	350	eng	85.20	29,820	6,386	6,386			6,386	6,386	42,592								
2	Collect and prepare samples quarterly (15 samples)	60	ea	16	960	tech	45.88	44,040	140	8,430	46	2,759		0	55,229								
3	GW Sample analysis (suite 1)	52	ea		0			0		0		0	489	25,438	25,438								
4	SW Sample analysis (suite 1)	8	ea		0			0		0		0	489	3,913	3,913								
5	Sample analysis (Chromium)	60	ea		0			0		0		0	100	6,000	6,000								
6	Annual report	1	ea	64	64	eng	85.20	5,450	192	192		0		0	5,642								
	Subtotal							79,310		15,008		2,759		41,737	138,814								
	Taxes @ 6.5 %									975					975								
	Subtotal														139,789								
	Indirects @ 21.5%														30,055								
	Year 1 total														\$ 169,844								
	Year 2																						
1	Collect and prepare samples quarterly (15 samples)	60	ea	16	960	tech	45.88	44,040	140	8,430	46	2,759		0	55,229								
2	GW Sample analysis (suite 1)	52	ea		0			0		0		0	489	25,438	25,438								
3	SW Sample analysis (suite 1)	8	ea		0			0		0		0	489	3,913	3,913								
4	Sample analysis (Chromium)	60	ea		0			0		0		0	100	6,000	6,000								
5	Annual report & ISEB/Biobarrier completion report	1	ea	244	244	eng	85.20	20,790	192	192		0		0	20,982								
	Subtotal							64,830		8,621		2,759		35,351	111,561								
	Taxes @ 6.5 %									560					560								
	Subtotal														112,122								
	Indirects @ 21.5%														24,106								
	Year 2 total														\$ 136,228								
	Performance Monitoring for Years 1 and 2														\$ 306,072								

Alternative 7, Monitored Natural Attenuation LHAAP-16 FS ADDENDUM

WBS NO. : 1.20.50				COMPANY NAME: SHAW E&I											
				PROJECT LOCATION: KARNACK, TEXAS				DATE: January 2010							
Item NO	DESCRIPTION	QTY	UNIT	LABOR		MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)			
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	
	Monitoring of 12 wells & 1 SW location, 2 sets QC samples (15 samples for analysis)														
	Year 3														
1	Collect and prepare samples quarterly (15 samples)	60	ea	16	960	tech	45.88	44,040	140	8,430	46	2,759		0	55,229
2	GW Sample analysis (suite 2)	52	ea		0			0		0		0	857.55	44,592	44,592
3	SW Sample analysis (suite 1)	8	ea		0			0		0		0	489	3,913	3,913
4	Sample analysis (Chromium)	60	ea		0			0		0		0	100	6,000	6,000
5	Annual report	1	ea	64	64	eng	85.20	5,450	192	192		0		0	5,642
								0							
	Subtotal							0		8,621		2,759		54,506	115,376
	Taxes @ 6.5 %									560					560
	Subtotal														115,936
	Indirects @ 21.5%														24,926
	Year 3 total														\$ 140,863
	Year 4														
1	Collect and prepare samples quarterly (15 samples)	60	ea	16	960	tech	45.88	44,040	140	8,430	46	2,759		0	55,229
2	GW Sample analysis (suite 2)	52	ea		0			0		0		0	857.55	44,592	44,592
3	SW Sample analysis (suite 1)	8	ea		0			0		0		0	489	3,913	3,913
4	Sample analysis (Chromium)	60	ea		0			0		0		0	100	6,000	6,000
5	Annual report	1	ea	64	64	eng	85.20	5,450	192	192		0		0	5,642
6	MNA Evaluation	1	ea	80	80	eng	85.20	6,820	192	192		0		0	7,012
	Subtotal							56,310		8,813		2,759		54,506	122,388
	Taxes @ 6.5 %									573					573
	Subtotal														122,960
	Indirects @ 21.5%														26,437
	Year 4 total														\$ 149,397
	Combined MNA Total for Years 3 and 4														\$ 290,260

Alternative 7, Long-Term Monitoring LHAAP-16 FS ADDENDUM

WBS NO. : 1.10.60		COMPANY NAME: SHAW E&I													
		PROJECT LOCATION: KARNACK, TEXAS													
		DATE: January 2010													
Item NO	DESCRIPTION	QTY	UNIT	LABOR				MATERIAL		EQUIPMENT		SUBCONTRACT		TOTAL (\$)	
				UNIT MH	TOTAL MH	CRAFT	\$/MH	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT	\$ VALUE	\$/UNIT		\$ VALUE
	Monitoring of 13 Wells and 1 Surface water location, 2 sets QC samples (16 samples for analysis)														
	Years 5,10,15,20,25,30														
1	Collect and prepare samples annually (GW)	14	ea	16	224	tech	45.88	10,280	140	1,967	46	644		0	12,891
2	Sample analysis (Suite 1)	14	ea		0			0		0		0	489	6,849	6,849
3	Collect and prepare samples annually (SW)	2	ea	16	32	tech	45.88	1,470	140	281	46	92		0	1,843
4	Sample analysis (Suite 1)	2	ea		0			0		0		0	489	978	978
5	Sample analysis (Chromium)	16	ea		0			0		0		0	100	1,600	1,600
6	CERCLA 5-year review	1	ea		0	eng	85.20	0		0		0	35000	35,000	35,000
								0							
	Subtotal							11,750		2,248		736		44,427	59,161
	Taxes @ 6.5 %									146					146
	Subtotal														59,307
	Indirects @ 21.5%														12,751
	Years 5,10,15,20,25,30 per-event costs														\$ 72,058
	Years 5,10,15,20,25,30 Total														\$ 432,346

Notes and Abbreviations:

* The costs for groundwater sampling during the first two years is included under the Performance Monitoring. Costs for years 3 and 4 are included under the MNA Activity .

\$ 432,346